

ACORN USER

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What does it mean to squeeze out every ounce of power?

Plus

- Viewfinder: the perfect complement to the Kinetic
- Music: Direct from digital file to digital sound
- Web: from domain to page
- Four pages of hot news
- *...and all the regulars*





ISSUE 237 SEPTEMBER 2001 £4.20

real **ingenuity**

(in-jen-new-it-ee) *n.*



There's a new RISCOS friendly Internet Service Provider in town, and we offer amazing services for incredible prices!

extra 256MB RAM free with every Omega!

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48x IDE CD-ROM drive *(R4)*	38.00
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15" (3 yrs on site warranty)	115.00
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OvationPro	150.00
Site licence	300.00
HTMLPro	29.95
Site licence	49.95
DataPower 2	175.08
up to 10 machines	407.73

OvationPro includes HTMLPro

KINETIC Risc PC

70Mb, 10Gb,40xCD **£1174**

138Mb 30Gb 40xCD Internet **£1409**

SA RiscPC 16Mb, 4Gb	939.00
SA RiscPC 16+2Mb, 40xCD, 4Gb	1033.00
SA RiscPC 32+2Mb, dvdCD, 8Gb	1092.00

mdmico

Base, 16Mb	£464
32Mb	£ 72
64Mb	£115
10Mb Network	£ 21
56k Int. Modem	£ 66

Pick your HD, CD & extras from our main list

If you would like one of these amazing new RISC OS 4 machines you can choose your own parts from our list and we'll build it for you! The Mico Base includes Base Unit, Floppy Drive, Keyboard, Mouse, Fireworkz, Pipedream + extra software!

Mico Base will not be sold on its own

mdomega

Would you like one of the all new, all singing, all dancing RiSC OS 4 based machines, designed to rock the market in the biggest way since the RiscPC launch of 1994?

- 287Mhz Intel StrongARM
- 20Gb HD, 52x CD-ROM
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- Lightning 2D/3D graphics
- USB, Modem, PCI Sound
- RISC OS 4 + Software

£1199

inc VAT and delivery

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- 25Mb Webspace
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£96 inc vat per year

Ask for our FREE Internet Trial CD

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£48* inc VAT

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inc WebsterXL and MessengerPro

£48* inc VAT

We have many more packages available, simply visit our ISP site

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*if purchased with an Internet account

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free .co.uk domain
free software

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- Full RISC OS Freephone Support



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r[i]

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Major Credit Cards Accepted

Small items	£ 6
Medium	£13
Anything else	£23

All prices correct going to press
E & OE

All products are supplied fully guaranteed, but not on approval



September 2001

ACORN USER

The best-selling RISC OS magazine in the world

ACORN USER

faster & faster

What does it mean to squeeze out every ounce of power?

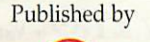
Plus
- Viewfinder: the perfect complement to the Kinetic
- Music: Direct from digital file to digital sound
- Web: from domain to page
- Four pages of hot news
- ...and all the regulars

Features

Regulars

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Out in the big bad world of corporate computing the bubble has burst. There was a time just four years ago when computing was seen as the ultimate spend – no one was ever fired for buying a newer computer.

But around the end of 1997 things began to change. Disillusion was setting in – after all, there is a point beyond which the claim that "the next computer will solve all your problems" just wears thin, or wears out completely.

Now Microsoft are well aware of this fact, naturally they are hyper-sensitive since their sales are a direct measure of the sale of desktop PCs. They probably spotted the trend around mid-1998 and began to draw their plans.

Which we see now, the new licensing scheme that (a) cuts out one of the distribution layers and (b) increases the cost of owning and using Microsoft products.

But they clearly missed the point – cutting out a layer of the distribution chain is fine (from a business viewpoint) and will, in itself, increase their profits.

However to increase the cost as well and then try to pretend they haven't, and claim they are doing what the customers want?

Well, you can fool all of the people some of the time ... but apparently the marketing droids of Microsoft are some people who have been completely fooled by their own PR.

In the UK, at least, the big corporate users are not impressed and many are looking to see if there are alternatives.

And there are.

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For all your computing needs.



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RiscStation 1999 2000

RISC OS compatible products for the new Millennium

0% Interest FREE credit (6 months) or **LOW** cost finance or **leasing on all systems (from £5.30/week)**
inc. peripherals, software & 2/3 yr optional warranties (min. deposit 10%)

RiscStation



SCORCHER

The R7500 Scorcher from RiscStation arrives with a quality CD ROM Reader/ ReWriter and media, providing a brilliant CD mastering platform for home & business.

from £769 + Vat (£903.58) £29.52/month

Twindeck base

from £799 + Vat (£938.82) £30.67/month

RiscStation Portable



Taking pre-orders NOW for the new portable
New Price to Be announced
Updated specification to be announced

Acorn



300Mhz Kinetic RPC

Latest Acorn StrongArm series machine

70MB, 10GB HD, 52xCD

from £935 + VAT (£1099) £34.51/month

Internet RPC 138MB, 30GB HD, 52xCD

£1,199 + VAT (£41.42 /month)

(includes internet pack)

MicroDigital Omega



Available soon the new RISCOS desktop

From **£999.00** +VAT (£1173.83 inc.)

287Mhz StrongArm, ATX Tower case
Full spec. on release
Free software pack

Above prices do not include monitors please see separate price list

RiscStation Lite R7500

From **£499** + Vat (£586.33)

Over £500 worth of FREE SOFTWARE

R7500 with 16MB memory & 4G Hard Drive			
R7500 base only	**£499 + Vat**	(£586.33)	(£19.16)
15" monitor system	**£599 + Vat**	(£703.83)	(£22.99)
17" monitor system	**£639 + Vat**	(£762.58)	(£24.53)
19" monitor system	**£699 + Vat**	(£880.08)	(£26.83)

The enhanced R7500 Plus with 50ns 64MB/ 10.2G			
Plus Base only	**£579 + Vat**	(£680.33)	(£22.23)
Plus 15" system	**£679 + Vat**	(£797.83)	(£26.06)
Plus 17" system	**£719 + Vat**	(£844.83)	(£27.98)
Plus 19" system	**£779 + Vat**	(£915.33)	(£29.90)

****Add just £20 (+ vat) to R7500 Plus / Scorcher Tower to include a Zip100 Drive****

RiscStation Palmtop



From only £143.83 + VAT
(**£169.00** inc. VAT)

Basic Model	£143.83	£169.00
With Plus Pack	£169.36	£199.00
ClassRoom Pack (5)	£725.00	£851.88

8 MB Machine with 1/2 VGA Screen Built in WP, SS, Diary, Sketch, Jotter, Spellcheck and Internet WWW and E-mail s/w. Psion © Compatable.

Acorn A7000 series



Classic RO3.7 / no CD	£449.00	(£527.58)	(£17.24)
Classic RO3.7 24x CD	£499.00	(£586.33)	(£19.16)
Odyssey Net RO3.7	£499.00	(£468.82)	(£19.16)
Odyssey Net RO4.0	£449.00	(£527.58)	(£17.24)
Odyssey CD	£549.00	(£645.08)	(£21.07)
Odyssey Primary	£599.00	(£703.83)	(£22.99)
Odyssey Secondary	£599.00	(£703.83)	(£22.99)
Odyssey Surf	£599.00	(£703.83)	(£22.99)

Above prices do not include monitors please see list

CD-ROM WRITERS



"ScorchIT" CD Writer Pack

Upgrade your Acorn or RiscStation 7500 with a home CD authoring package as found in the RiscStation SCORCHER machine. This package contains the latest version of CD Burn, Writable and ReWritable media to get you started and one powerfull

8x8x32x CD ROM Writer/Rewriter.

only £189 + Vat (£222.08)

Now SCSI Version with 12x10x32x Re-Writer

only £285 + Vat (£334.88)

IDE 8x8x32x CDR/W	£139.00	£163.33
IDE 12x10x32xCDR/W	£199.00	£233.83
SCSI 12x10x32x CDR/W	£237.45	£279.00
CD-BURN	**£49.00**	£57.58
CD-SCRIBE 2	**£39.00**	£45.83

External versions Available

neTWORX neTWORX HD



from £399 + Vat (£468.83) £15.32/month

HD fr'm £449 +Vat (£527.57) £17.24/mth

50 mip Arm7500 system with 16Mb memory, (HD version & Hard Drive) , built in ZIP drive support, Midi support, 3D sound, & sampler , 10baseT port as standard, RISCOS 4 as standard, High speed serial , High speed parallel, expandable to **256Mb** memory & hard drive / CD-ROM etc.

Psion PalmTops





Series 5 Revo	Series 5 MX	Series 7
£199 + VAT (£233.83)	£319 + VAT (£374.83)	£595 + VAT (£699.13)
* 8MB memory WP, SS, Diary, Sketch, Jotter, Spellcheck	*16MB memory WP, SS, Diary, Sketch, Jotter, Spellcheck	*16MB memory WP, SS, Diary, Sketch, Jotter, Spellcheck

Complete Acorn A3020 (or A3000 if required) Acorn HD systems inc monitor **£99.00 inc VAT** (£85 ex. vat)
A4000 and A5000 Systems also available

Refurbished Acorn 710



Bases from £199 + VAT

Systems with New 15" Monitor from £290 + VAT.

Kinetic (64MB) upgrades

New SA upgrade using SDRAM

Processor card (inc RO4)	**£399.00**	**(£468.82)**
Trade-Up 1 (from SA & RO4)	£299.00	(£351.32)
Trade-Up 2 (from RO4 only)	£349.00	(£410.07)
Trade-Up 2 (from SA & RO3.7)	£349.00	(£410.07)

128MB version extra £69.00 (£81.08)

RISC OS 4
only £99 inc VAT

CD-ROM media

	ex VAT	inc VAT
CDR CD-ROM	**£0.68**	**£0.80**
CDR 10 pack	**£5.95**	**£6.99**
CDR 25 pack	**£12.76**	**£14.99**
CDR 80min 10 pck	£7.65	£8.99
CDR 80min 25 pck	£17.01	£19.99
CDR/W CD-ROM	£1.28	£1.50
CDR/W 10 pack	£11.00	£12.93
5.2Gb DVD RAM	£25.00	£29.37

Backup Drives

IDE Zip / LS120 require s/w drivers or RiscStation style hardware support.
Parallel Drives inc. RISCOS Software

Zip 100 IDE inc media	**£49.00**	**£57.58**
Zip 250 IDE inc media	**£85.00**	**£99.87**
Zip 250 parallel ext.	£129.00	£151.58
JAZ 2GB SCSI ext.	£235.00	£276.12
JAZ 2GB Parallel ext.	£299.00	£351.32
Orb 2.2 GB IDE	£165.00	£193.87
Orb 2.2 GB Parrallel	£199.00	£233.83
LS120 Media	£4.00	£4.70
Zip 100 Media	**£7.65**	**£8.99**
Zip 100 Media 5 pack	**£34.03**	**£39.99**
Zip 250 Media	**£9.40**	**£11.05**
Zip 250 Media 5 pack	**£45.00**	**£52.87**

Removable Drives

4GB IDE Pullman	**£65.00**	£76.37
4GB Parallel Pullman	£125.00	£146.87
4GB P'll Datasafe	£105.00	£123.37
10GB IDE Pullman	**£85.00**	£99.87
10GB P,llel Pullman	£145.00	£170.37
10GB P'llel Datasafe	£125.00	£146.87
20GB IDE Pullman	**£95.00**	£111.62
20GB P'llel Pullman	£155.00	£182.12
20GB P'llel Datasafe	£135.00	£158.62
650MB PD Media	**£19.00**	£22.32
750Mb Nomai	**£38.00**	£44.65
2 GB Jaz Media	**£68.00**	£79.90
2.2 GB ORB Media	**£32.00**	£37.60

MP3 CD Player



Plays back ordinary audio CDs, CD-R and MP3CDs (which can hold 160-200 MP3 tracks each).

Ideal with CD-ROM Writers

only £69.00 exc. VAT
(£81.08 inc.)

CD-ROMS



SCSI 8x
4way **Autochanger**
£75.00 + vat (£88.13)

52x IDE	£34.00	£39.95	40x SCSI	£65.00	£76.37
48x IDE	£30.00	£35.25	32x SCSI	£59.00	£69.33

External CD ROMs

48x IDE (with cable)	**£85 + VAT**
40x SCSI I(with cable)	**£115 + VAT**
40x SCSI II(with cable)	**£120 + VAT**
6x 40x CD Tower (+HD space)	£449 + VAT

Internet Packs from **£85 + VAT (£99.88)** available for all machines include Internet software, ISP setup and 56K modem

Acorn MEMORY & Upgrades (with 3yr warranty)

Upgrade	A310	A440	A4X0/1	A540	A3000	A3010	A3020	A4000	A5000
1-2MB	-------	-------	£25	-------	£15	£15	---------		---------
2-4MB	-------	-------	£50	-------	---------	---------	£40	£40	£45
1-4MB	£35 *	-------	£75	-------	£35	£45	---------	---------	---------
4-8MB	£55	£55	£55	£45	£55	---------	---------	---------	£55 *#
RISCOS Carrier	£19 *	£19 *	---------	-------	---------	---------	---------	---------	---------
RISCOS 3.1	£25	£25	£25	£25	£25	---------	---------	---------	£25
MEMC1a	£20	£20	---------	-------	---------	---------	---------	---------	---------
Arm3(33)	£45	£45	£45	-------	£45 *	---------	---------	---------	---------
Arm3(25) & FPA10	£85	£85	£85	-------	£85 *	---------	---------	---------	---------
FPA10	£45	£45	£45	?		---------	---------	---------	£45
VIDC/IOC	£20	£20	£20	£20	£20	---------	---------	---------	£20

N.B. All above prices exclude VAT at 17.5%
Re-work if required £25 (£29.38) # not applicable to 33MHz A5000

MEMORY

	Ex VAT	Inc VAT
8Mb SIMM EDO/FPM	£8.51	£10.00
16Mb SIMM EDO/FPM	£20.00	£23.50
32Mb SIMM EDO/FPM	£35.00	£41.12
64Mb SIMM EDO/FPM	**£41.70**	**£49.00**
64Mb SIMM RS 50ns	**£69.00**	**£81.08**
128Mb SIMM from	£96.00	£112.80
1Mb VRAM	£25.00	£29.37
2Mb VRAM	£75.00	£88.12
1-2Mb (exchange)	£65.00	£76.37
64MB 133M SDRam	£16.59	£19.49
128MB 133M SDRam	£22.50	£26.44
256MB 133M SDRam	£34.00	£39.95

Compact Flash for Cameras / Osaris etc.

32MB	£27.00	£31.73	128MB	£64.00	£75.20
64MB	£35.00	£41.12	256MB	£160.00	£188.00

Smart Media for Cameras

32MB	£25.00	£29.37
64MB	£42.00	£49.35
128MB	£77.00	£90.48

NETWORKING

ETHERNET INTERFACES

	Ex. VAT	Inc VAT
A3000 int. 10base2 or T, Access+	£89.00	£104.58
A400/A5000 10base2 or T Access+	£89.00	£104.58
A400/A5000 10base2 & T Access+	£99.00	£116.33
A3020 10base2 Access+/ext. MAU	£94.00	£110.45
A3020 10baseT Access+/etx. MAU	£94.00	£110.45
Risc PC/A7000 10base2 & T Acc+	£99.00	£116.33
Risc PC/A7000 10baseT Access+	£94.00	£92.83
Ant Access + ROM upgrade	£10.00	£11.75

Cables

2M	£2.00	£2.35
3M	£3.00	£3.53
5M	£5.00	£5.87
10M	£9.00	£10.58
20M	£15.00	£17.62

State 10base2 or Cat5 UTP
any size made to order

Network Hubs *(more available)*

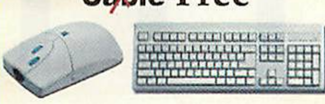
	Ex VAT	Inc VAT
8 Port 10bT +1 10b2	£35.00	£41.12
8 Port 100 *special*	£89.00	£104.57
8 Port 100/10 Auto	£99.00	£116.32
18 Port 10 16T+ 2BNC	£75.00	£88.12
16 Port 100/10 Auto	£229.00	£269.07
16 Port 100/10 Auto (inc 3 port switch)	£269.00	£316.07
24 Port 100/10 Auto	£299.00	£351.32
24 Port 100 *special*	£249.00	£292.57

We supply and / or install all network components please ring for your requirements

NETWORKING SOFTWARE

Topcat site licence	£489.00	(£587.50)
NTfiler site licence	£97.00	(£113.98)
Omniclient site licence	£489.00	(£587.50)
Lanman98 single user	£35.00	(£41.13)
Win95FS single user	£35.00	(£41.13)
Lanman or Win95FS 10 user site licence	£110.00	£129.25
Lanman or Win95FS 20 user site licence	£156.00	£183.30

Cable-Free



Mouse for RiscStation & A7000 /Mica £19.95 inc.
Mouse for Risc PC / A5000 /A400 etc. £39.95 inc
Keyboard for RiscStation, RPC /A7000 £29.95 inc.



Trackball for R7500 / A7000 £19.95 inc
Trackball for RPC £42.95 inc

	Ex. VAT	Inc. VAT
Acorn (RPC A5000 etc.)Mouse	**£20.42**	**£23.99**
Acorn (flex adapter) Mouse	**£25.49**	**£29.95**
A7000 / Riscstation Mouse	£10.00	£11.75
Riscstation infra-red Mouse	£16.98	£19.95
Riscstation Ergo Trackball	£16.98	£19.95
Infra-red Keyboard (PS/2 & AT)	£25.49	£29.95
Lower CASE Keyboard (PS2)	**£29.78**	**£34.99**
A400/A5000 replacement K/brd	£59.00	£69.33
A400/A5000 Ergo Keyboard	£69.00	£81.08
A4 replacement keyboard	£49.00	£57.58
A4000 Keyguard (special needs)	£25.00	£29.37
A3000 /A300,400,500 Keyguard	£25.00	£29.37
A3 touchpad for Concept Keybrd	£25.00	£29.37

"Accent" Midi upgrades

Midi Break-out cable with driver sw £15 + VAT
Yamaha DB51 XG Wavetable Card, Midi cable & drivers £99 + VAT
Yamaha DB51 XG Wavetable Card, Midi cable, drivers & Evolution MK149 keyboard £199 + VAT

Podule "MidiMax Card	£79.00	£92.83
MiniPodule Midi card (A3x00)	£69.00	£81.08
Refurbished Midi card A3x00	£20.00	£23.50

Desktop FAX MODEMS

56k V92 Hayes Accura	£85.00	£99.87
56k V90 (Rockwell)	**£49.00**	**£57.58**
56k V90 Internal for RS	**£49.00**	**£57.58**
ISDN modem (external)	£79.00	£92.83
!Dialler	£17.02	£20.00
Oregano	£49.00	£57.58
Webster XL	£21.28	£25.00
Messenger Pro	£25.53	£30.00
ArcFax Fax software	£26.38	£31.00

Phoebe RISC PC 2

Bare Phoebe cases
(no electronics sorry)
Only £25.00
(£29.38 inc)

3.5" IDE Hard Drives

	Ex VAT	Inc VAT
210Mb	*£25.00*	*£29.37*
500MB	*£38.30*	*£45.00*
4.3GB #	£50.21	£59.00
10.2GB *	£63.83	£75.00
20.1GB *	**£72.34**	**£85.00**
40.0GB *	**£85.10**	**£99.99**
60.0GB *	£125.00	£146.87
80.0GB *	£170.00	£199.75
100 GB *	£238.00	£279.65

requires RISCOS 3.6 /3.7 * requires RISCOS 4 or Partitioning s/w for only £25.00 + vat

SCSI HARD DRIVES

2.0 Gb	£69.00	£81.08
4.3Gb (5400 or 7200)	£85.00	£99.87
9.1Gb (7200 rpm)	£145.00	£170.37
18.6Gb (10K / 7200 rpm)	£179.00	£210.33
36.4Gb (10K / 7200 rpm)	£329.00	£386.57
73.4Gb (7200 rpm)	£738.00	£867.15

A3020 / A30X0 & I/F

	A3020 Ex VAT	A3020 Inc VAT	A30X0 & I/F Ex VAT	A30X0 & I/F Inc VAT
170MB	£35.00	£41.12	£85.00	£99.87
340MB	£45.00	£52.87	£95.00	£111.62
500MB	£55.00	£64.62	£105.00	£123.37
810MB #	£70.00	£82.25	£100.00	£117.50
1.0Gb #	£99.00	£116.32	£129.00	£151.58
2.1GB #	£109.00	£128.08	£139.00	£163.33
4.3GB #	£129.00	£151.58	£159.00	£186.83

A30X0 version includes CD ROM i/f which can be used in A3020 or A4000. For external A3000 i/f add £20.00 +VAT # includes partitioning software

COLOUR SCANNERS

All scanners inc RISCOS Software



P'llel Mustek 600dpi	£99.00	£116.32
Mustek A4 1200dpi	£126.81	£149.00
Epson Perf'n 1200S	£212.00	£249.10
Epson Perf'n 1640S	£220.00	£258.50
Epson Perf'n Photo	£269.00	£316.07
Epson Photo unit	£85.00	£99.87

ImageM & Twain also available separately

Hardware Bargains		exc VAT	inc VAT
A3000 2Mb bases from	#	£25.00	£29.37
A3020 2Mb HD bases from	#	£39.00	£45.83
A4000 2Mb bases from	#	£100.00	£117.50
A5000 4Mb bases from	#	£199.00	£233.83
SCSI 4x6x autostacker (new	)	£115.00	£135.13
A5000 /A400 Ext CD-ROM	#	£42.00	£49.35
A310 /400 Floppy drives	#	£12.00	£14.10
A3000 / A400/1 Floppy drive	#	£12.00	£14.10
A30X0 keyboards	#	£20.00	£23.50
A3000 PSU's	#	£20.00	£23.50
A30X0 analogue / user card	#	£15.00	£17.62
A30X0 IDE / user port cards		£40.00	£47.00
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HD Re-label Ac or PC 100	£12.77	£15.00
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Computer systems.................................£13 + vat
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POSum

Over the past few months Image Software have been adding more and more modules to *EBMS* — the software behind the *POSum*. What they're aiming for is a Total Business Management package; Solutions, not just for the retail shop owner, but all areas of the commercial and industrial marketplace. The customer simply selects what modules suits his/her business:

• If you run a newsagent: you add on the newsround management module;

• If you build equipment: you add on the C.I.T. module;

• If you want Internet sales: you add on the e-COMmerce module;

and so on. *POSum* solutions become a 'pick and mix' affair, where they are customised to the client's requirements.

POSum is not just meant is a solution for the corner shop owner. *POSum* systems can now find their way into newsagents, health-food stores, equipment manufacturers, PC builders, factory outlets, repair service providers, garages... and a whole host of other commercial and industrial fields.

If you know anyone who could be interested in a *POSum* solution in the UK you need to get in touch with Image Software.

Did you know that most EPOS systems use DOS rather than Windows because of reliability issues ? Obviously this results in the lack of a GUI; an area which we have covered...

It's not very often that you hear the phrase "Great, it's not Windows", but that is something that the *POSum* sales team are hearing time and again. Developers are scared of using an unreliable OS because of the problems it brings. Just ask any EPOS reseller and they'll tell you plain and simple; Windows scares them.

RISC OS not only provides a stable GUI-based OS but it makes an ideal embedded system for truly discless clients, not requiring a cut-down version of the OS.

Mal McClenaghan of RiscStation Australasia can already document *POSsum* solutions that are replacing PC-based systems which continually fall over. Sales continue down-under with *POSsum* systems finding their way into various areas of the retail market.

It's nice to hear of RISC OS solutions in use in busy shopping centres, where they are in some cases replacing PC-based solutions. EPOS systems need to be reliable because they are the life support system of the business.

July saw the first sale of *EBMS* on mainland Europe and even before a distribution agreement has been signed. It looks as though our European cousins are champing at the bit for a decent EPOS package.

The new C.I.T. (Component, Integration and Tracking) module provides a system for people who build equipment and need to keep track of serial numbers, batch numbers, builds, and so on.

Using the module you tell the system exactly what components make up a piece of equipment (for example, a computer).

You can submit builds to the workshop for assembly, where the assembler is given step-by-step instructions on how to build the machine and are prompted for any information you would like to track (for example, serial numbers of components).

Serial numbers (and other details) are all logged so you can check on the validity of returned equipment (was that faulty component really supplied by you?)

Because the C.I.T. module integrates with the job control system, already implemented into *EBMS*, 'build jobs' can be traced from start to finish using the standard job control facilities.

The addition of this module is described as another step towards

POSum™

Business management solutions ...



blossom

achieving a 'Total Business Management Solution' for RISC OS; with point-of-sale, stock control, customer accounting and job control facilities in a single, integrated package.

EBMS and complete *POSum* systems are available right now. For users who already have a RISC OS machine *EBMS* can be purchased direct from Image Software.

Said Darren Windsor of Image Software: "Now there's no excuse for all you resellers out there who build, sell and/or repair RISC OS machines not to be using *EBMS*.

"For those using *Prophet* you can simply drag-and-drop your entire database into *EBMS*; no conversion or messing with data required. And there's no excuse for everyone else in the RISC OS community not to be pushing *POSum* into the outside world.

"A free demo version and more information is available on the Image Software Web site. I hope that everyone in the RISC OS community will all help us to make *POSum* the success it deserves to be. We could really do with your help."

All mainland Europe sales enquiries should be directed to Frank Kraaij (of Desk) on +31-10-2860541, or by e-mail to **info@deskvof.nl** Users requiring a complete *POSum* system, and potential re-sellers, should contact Alan Gibson (of Liquid Silicon) on 01592 592265, or by e-mail to **sales@liquid-silicon.com**

Image Software (UK), 48 Hinchliffe Road, Poole, Dorset BH15 4ED. Tel: 01202 269720 Mob: 07740 622861 Fax: 01202 685072 E-mail: **sales@imagesoft.co.uk** Web: **www.imagesoft.co.uk**

Big Brother is watching YOU

We meant to mention it last month but our news input file just wouldn't slow down! Not content with the news about *POSum* Image Software have been bombarding us with information about a host of their other software.

To begin with there are two programs for those with networks of machines — one to view the screen of any other machine on the network, and another to allow www access to any machine on a network.

With *BigBro* (£29.95 including site licence) you can view a screenshot of any RISC OS machine on your network (running the *BigBro* client software). It allows you to keep an eye on your network the easy way, from the comfort of your own machine and;

- Runs across any TCP/IP network (including the Internet);
- Allows multiple views at any one time (almost unlimited);
- Let's you save out screenshots to disc, as Sprite files;



!BigBro



- Produces auto updates either in as close to real time as possible, or at given intervals of time;
- Includes a quick zoom option in/out from 50% to 100% which helps you keep your desktop tidy;

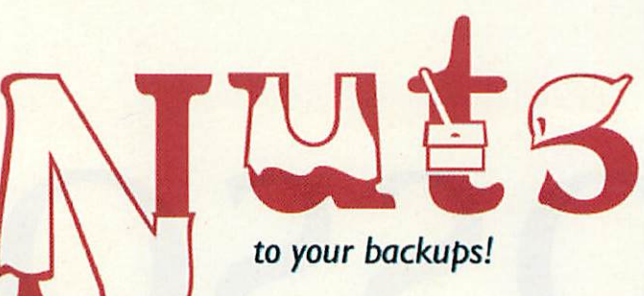
While *BigBro* allows you to view the rest of your network, *ImagePrxy* (£39.99) allows the whole of the network to access the World Wide Web. This application has the following abilities:

- Supports almost unlimited number of clients of any platform;
- Allows you to restrict access to designated sites or sites containing certain words in their domain name;
- Excludes individual terminals from accessing the Internet;
- Provides local caching, for faster fetches of sites already visited;
- Tested with *Oregano*, *Fresco*, *WebsterXL*, *Internet Explorer*,



Big Brother is watching YOU (more)

Netscape and *Konqueror*;
- Supports automatic dial-up using *DialUp* (from R-Comp), when a page is requested which is not in the cache;



For those concerned with backing up their data, *Nuts* (to your backups) for just £10 you can backup data in the background (which means while doing all your other work on your machine) using your own backup scripts for which full information is included. There is support for compressed or uncompressed backups with self-restoring code — double-click on the backed up archive to restore it to its original location.

The application even includes 'auto power off after backup' for those with a RiscStation machine.

Still on the theme of nuts, but this time caching sites for users of *Oregano*, *Nutmeg* is an advanced version of *Cassia*. While *Cassia* (at £10) provides:

- A cache which stores files and images locally, to allow them to be reloaded quickly when re-visiting sites;
- Filtering services to allow restrictions to be placed on sites which can / can't be visited;
- Integrated support for *DialUp*;

Nutmeg (for £20) also provides facilities for saving out Web sites (or sections of them) from the cache, to disc.

Whew! All the above are from Image Software 48 Hinchliffe Road, Poole, Dorset BH15 4ED and you can check their site at: **www.imagesoft.co.uk**



Neither man nor moose

Bob Brand has just announced a preliminary release of a port of *GnuPlot* 3.7.1 for RISC OS. *GnuPlot* is a command-line driven plot program that can produce 2D and 3D plots of (almost) any function or set of data.

It exists on virtually any computer platform that has a C compiler. It can produce output in, among others, DXF, GIF, PostScript and EPS, CGM, HP-PCL (most HP DeskJets and LaserJets), most dot matrix printers, PNG, LaTeX (and pstricks, MetaFont) and, of course, RISC OS Draw and Sprite format.

The Draw output is closely modelled after the PostScript driver. It supports colour and black-and-white drawfiles, both with solid lines and with dash patterns as well as 75 different points.

The Sprite output can be in 16 colours (the standard desktop colours), 16 grey tones or black-and-white and with transparent or opaque background. For the rest it is like the other *GnuPlot* bitmap drivers.

This is a preliminary release. There is as yet no proper RISC OS front-end, it simply runs in a task window. And it uses *Draw* and *Paint* (or any other program that recognises drawfiles or sprites) as viewer. But since its main use is probably in processing scripts rather than interactive use, this is not too much of an inconvenience.

The sources are provided as well, so it is possible to compile draw and sprite support into your existing version of *GnuPlot* for (for example) Linux. A Windows version with draw and sprite support can be downloaded as well, in case someone wants to create drawfiles for use with *OakDraw* or *Xara X*. It works with the demo versions of both programs.

Download it from **www.brandpoint.tmfweb.nl/riscos/** Please send comments, remarks and so on, to **rogp@brandpoint.tmfweb.nl**

In brief

Bank to Bank

MAUG (Manchester Acorn User Group) have just moved their regular meeting place following the second change of landlord in six months at their old meeting place at The Bank at Sale pub. They're now meeting at another bank — this time beside the bank of the River Mersey.

The group are now meeting at the Trafford Metrovick Rugby and Cricket Club, Finnybank Road, Sale, Cheshire. The meeting place is only just south of the river (by about 10 metres) and is easily accessed from Manchester or anywhere with easy access to the M60 (it is just off Junction 7).

The first meeting at the new venue included a question and answer session by the Acorn User editor, Steve Turnbull. Unlike the Bank pub the new venue has easy ground floor access and parking facilities are even closer. All RISC OS users are invited to the meetings on the third Wednesday of every month and there are no membership fees.

Vantage No. 1

I've been talking about it for some time now but it's still worth mentioning that I've received my copy of Vantage v1.00. This is not a pre-release version — I've been getting those for a long time and reporting on them — nor is it a special copy as an Acorn User columnist. Vantage v1.00 has at last been released to the people who matter — that's you and me. My initial response? Both software and manual are excellent.

Broken movies

MovieDB was mentioned in passing in the Graphics column some months ago. Users of the application may have noticed that some of its larger databases have become broken in the last few months and a version of the software is finally available which builds

Continued...

Liquid Silicon

• Computers & Music Hardware • Upgrades • Software • Cables etc •

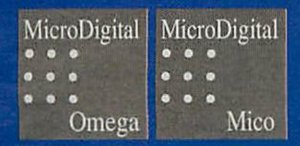
Acorn

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R7500 Lite (with their 19" monitor)	£891.00

The Lite+ model is the same as the Lite, but has an 8.4Gb HD and 64Mb RAM fitted as standard.
R7500 Lite+ To Lite prices, please add £94.00

The Scorcher model is the same as the Lite, but has a 10Gb HD and 64Mb RAM fitted as standard, plus at least a 4x4x24 CD ReWriter, CD Burn and a blank disc.

R7500 Scorcher To Lite prices, please add £315.00
R7500 Scorcher Twindeck (as Scorcher, with additional 48x CD drive) To Lite prices, add £349.00

The Networx model is a Lite without the HD or CD fitted. Monitors are available as with the Lite.
R7500 Networx (no monitor) £480.00

The Networx HD model is the same as the Networx, but has a (minimum of) 2Gb HD fitted as standard.
R7500 Networx HD To Networx prices, add £59.00

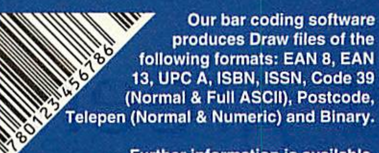
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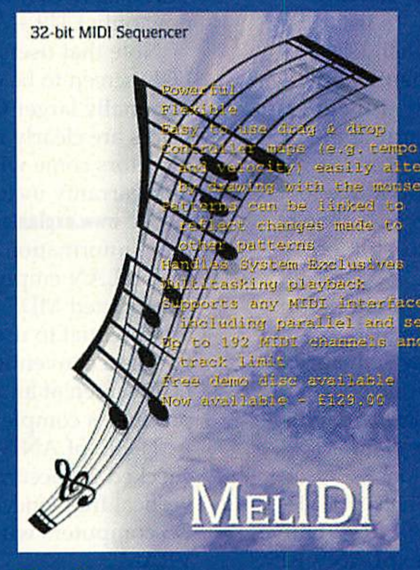
We supply a range of CCD and laser bar code scanners which include our !BarReader driver software to allow bar codes to be read into and control most desktop software.



Further information is available.
Complete systems from £137.63

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iiyama Vision Master 406 (17" SF)	£241.20
iiyama Vision Master Pro 1411 (17" NF)	£222.15
iiyama Vision Master Pro 411 (17" NF)	£239.85
iiyama Vision Master Pro 410 (17" NF)	£295.60
iiyama S900MT1 (19")	£241.20
iiyama Vision Master 452 (19")	£336.40
iiyama Vision Master Pro 451 (19" NF)	£411.20
iiyama Vision Master Pro 452 (19" NF)	£339.15
iiyama Vision Master Pro 453 (19" NF)	£520.00
iiyama Vision Master 505 (21")	£656.00
iiyama Vision Master Pro 511 (22" NF)	£689.65
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iiyama Pro-Lite 3815 (15" LCD)	£492.80
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A3020/A4000 2-4 Mb	£49.00
A5000 2-4 Mb	£55.00
A300, 400, 5000 4-8 Mb	£128.00
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128Mb EDO	£209.75
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RiscStation XG card, cable & keyboard	£245.95
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Sibelius 7	£520.95
Sibelius for PC/Mac is also available	
Optical Manuscript	£259.00
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Omega SCSI 2 PCI card	£72.95
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Risc PC second slice (no PSU)	£95.00
RISC OS 4 (fitting available)	£109.95
RiscStation internal modem pack	£99.95
RiscStation second serial port	£Call
Scanners	£Call
StrongARM & RISC OS 3.7	£269.00
StrongARM & RISC OS 4	£299.00
Triple serial card	£99.95
ViewFinder card	£235.00

Other Software

Abuse	£20.00
Ankh	£23.00
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Chaos Engine	£19.50
DataPower 2	£165.00
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Oregano CD	£57.50
Other Worlds CD	£17.95
Ovation Pro	£139.95
PC Pro 3	£70.00
Personal Accounts	£44.00
Photodesk Olympic	£127.95
Prophet 3+ Pro	£160.00
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Lower green costs

Obviously one way of reducing waste energy output is to use RISC OS computers rather than PC machines. Too many baulk at the next step though as the truly green would find a way of cutting the heat generated by their monitor. It's obvious that we need to move to LCD screens when we next change monitor but the price is still too prohibitive. Or is it?

ExpLAN sell LCD monitors for RISC OS and they have just announced a reduction in the prices that may finally suit your pocket. The monitors come complete with RISC OS definition files and configuration instructions.

The Mitsubishi 17-inch 1700M+ has a resolution of 1280x1024 (native) and 1360x1024 using ExpLAN's RISC OS driver and was £739 +VAT. It is now only £719 +VAT. The Panasonic/Hannstar 15-inch L15C, 1024x768 (XGA) was £369 +VAT and is now only £349 +VAT.

Note that users generally accept an LCD screen to be equivalent to a nominally larger CRT screen and the prices are clearly moving ever closer. Both monitors come with 3-year on-site/swap-out warranty including backlight.

See **www.explan.co.uk/hardware/scrn.html** for more information.

ExpLAN emphasise that a properly constructed MDF (and appropriate lead) are essential to use an LCD monitor. Unlike a conventional CRT, driving an LCD screen at an incorrect frequency can produce a completely blank screen.

The ExpLAN MDF's supplied are checked for accuracy of horizontal and vertical frequency and pixel clock on RISC OS computers with all combinations of VRAM.

ExpLAN Computers Ltd., PO Box 32, Tavistock, Devon PL19 8YU E-mail: **info@explan.co.uk** Tel: 01822 613868

Lost and found?

Finder, a multi-tasking file search utility, goes from strength to strength. The recently released version 1.2 now allows you to search via the file datestamp, either by a specified range of dates, or by age in days, hours or minutes. You can also specify a size range for the files you are interested in.

You can specify multiple file types, separated by commas, applications and directories can be searched for by specifying the dummy filetypes 'App' and 'Dir' respectively.

Not only that but *Finder* now has a memory! When you open the search dialog box, the last values you entered (if any) will be in the fields ready for you to adjust them for your new search.

To cap it all the author, Chris Nelson, has clearly been checking for those extra bits that make an application acceptable to all (maybe he has been reading a column not to far from here!) and *Finder* now fully supports interactive help on all dialog box icons.

Download *Finder*, visit its Web site: **www.nhal.demon.co.uk/finder/**

What a windfall

Windfall Engineering has just opened its own Web site and, to celebrate the occasion, the price of *ViewFinder* cards has been permanently lowered.

The *ViewFinder* card allows standard Risc PC machines to display much higher resolutions in more colours.

In addition, an extra 10% summer sale discount is given on *ViewFinder* cards, the high performance graphics card designed for Risc PCs by John Kortink, ordered before the end of August 2001.

The new Windfall Engineering Web site at: **www.windfall.nl** E-mail: **kortink@inter.nl.net**

Knights in white satin

Everyone using RISC OS4 will naturally already have a copy of David Ruck's *DiscKnight* program. Haven't you?

Just in case you have forgotten to get this essential piece of insurance the checking and repair tool is available by credit card over the Internet. Although there are other tools to deal with corrupted discs using RISC OS3, *DiscKnight* is the only one that will deal with RISC OS 4 too.

Their credit card facility was temporarily withdrawn recently because their ISP, OakTree, went into liquidation. The scheme is now up and running again on **www.armclub.org.uk/products/discknight** where a free checking only version is also available.

In brief

them correctly.

For those interested the problem arose because MovieDB was using 24-bit indexes and some data files (actors and plots) now exceed 16MB. A new database must be built for this version because there is non backward compatibility in the new keyfiles.

The second pass of the key sorting has been improved too which requires up to 4Mb of extra memory depending on the list being sorted but is much faster. It should still work if memory is tight (using the old disc thrashing method).

If you do download the new version you should note that v1.41 is currently a beta release in case there are problems and please remember you need to notify the author to have a chance of getting those problems solved. MovieDB can be found at: **www.actrix.gen.nz/users/rick/moviedb.html**

Build a kit ... clock?

RISC OS users may remember Smart DTP producers of the popular PublishArt resource collection for RISC OS machines. James Parry proprietor of Smart DTP has launched his new business e-kits and its first product at the Wakefield Show.

Design and make your own clock kit includes everything you need to design and make your own clock using your Acorn/RISC OS computer. The product features high quality templates and design a dial drawfiles supplied complete with quality clock mechanism. As a special bonus the kit includes the full edition of PublishArt 98 all for only £10. Apparently e-kits sold out on day one of the show!

Further information can be obtained from e-kits tel 01332 843685 or **www.ekitsonline.com**

Contacting AU

news@acornuser.com
John Cartmell



Regulated polygons

While I was at the Wakefield Exhibition I was asked about producing repeating patterns and whether there are any programs to help you produce such patterns. Of course there are, and two sprang to mind — *Reptile*, from Kudlian and *Versatile* from Dial Solutions.

I don't know about the latter but the first is on the Kudlian CD that is being sold at £60 and includes many other useful programs; it's my strong recommendation for any Primary School as the CD includes most of the programs needed to cover the National Curriculum and the £60 includes a whole school site licence.

Back to Wakefield. My interrogator simply wanted to produce some tessellations based on a square design and I had to recommend an even simpler solution — *Draw*. Of course *Vantage*, *ArtWorks*, *Vector*, *DrawPlus* or *DrawWorks* would do the same job. For the examples that follow I'm using *DrawWorks Third Millennium* but the instructions and results are exactly the same as for *Draw* itself.

There are three regular polygons that tessellate on a flat surface, if you restrict yourself to using the same shape throughout, and the easiest to manipulate is a square. In the example I've drawn a square with the closed path tool producing end points (just click) every centimetre around the perimeter. Of course I've used the grid and grid lock to ensure that the lines follow the grid.

The very simplest tessellation would be the square itself — but that would be a touch boring! Instead we will tweak one side and, to ensure the tessellation is correct, tweak the opposite side in exactly the same way. The end points can be moved by selecting the square, moving to edit with Control+E and dragging the blue end points with Adjust — clicking Select will end the edit session.

As long as you do exactly the same with opposite sides, and don't overlap lines, the object will tessellate exactly with identical shapes — and keeping the grid-lock on will help ensure the objects line up exactly.

You don't need to be restricted to straight lines. While editing you can change a segment to a curve by selecting an end point and, using the menu or Control+F8, add control points to the segment. Moving the control points (using Adjust) will produce the curve.

If you overlap two (yellow) control points they will both disappear — but as long as you don't make the object too complex you should be able to work out where they are and still move them if required. Remember that both end points and control points must be placed in exactly equivalent positions along opposite sides of the 'square' in order to maintain the tesselation.

While using the menu it's worth while experimenting with the other options. In my experience the edit function in *Draw* is very much underused.

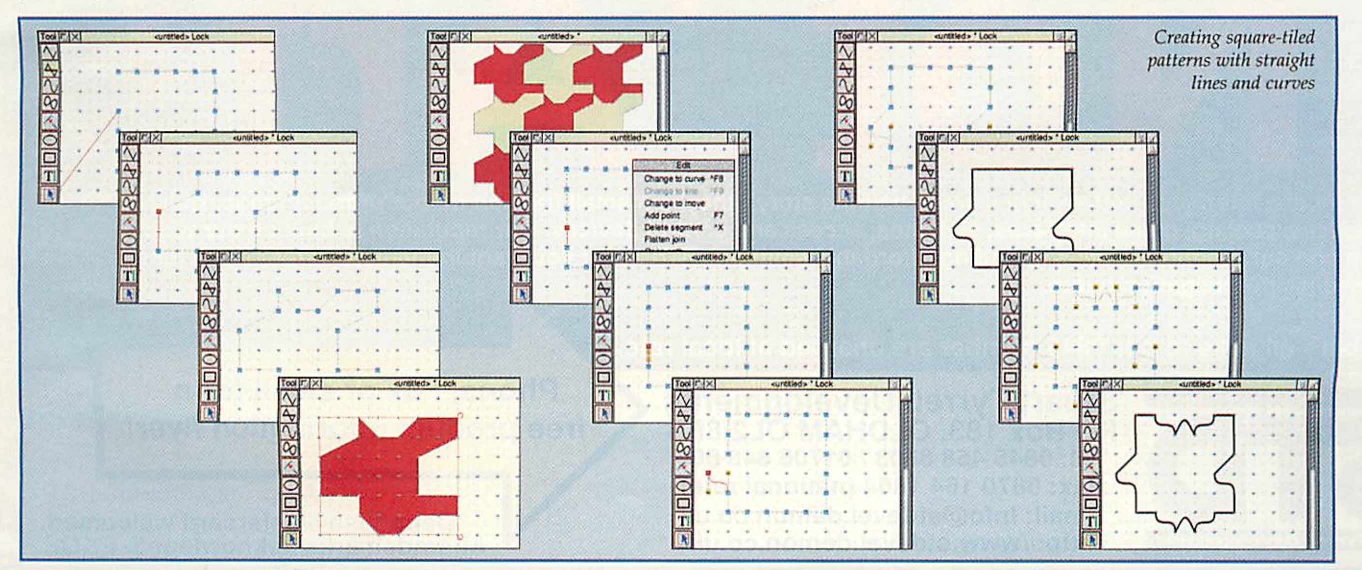
On the other hand those of you who have received your copy of *Vantage* will have a far superior method of converting segments to and from curved lines and might use this task to practice with their new acquisition.

At the beginning I mentioned that the square is the simplest regular polygon that will tessellate on a flat surface and our objects were (very) irregular polygons based on the square. Any of the RISC OS vector drawing programs allow the use of an isometric grid (you'll need the Grids module for *ArtWorks*) and using this alternative grid you can produce the other two tessellating regular polygons.

I'll leave it as an exercise for the reader to work out what those shapes are and, harder, to see if it's possible to tweak those shapes in the same way that we used to tweak our squares.

Contacting AU

graphics@acornuser.com
John Cartmell



Creating square-tiled patterns with straight lines and curves



Cache in with Cassia

Looking back four or five years in the newly-restored Deja/Google usenet archives, the name Darren Windsor frequently pops up in Acorn games and networking newsgroups. In the true Acorn tradition, the enthusiast gamer and programmer graduates and becomes a commercial software developer who identifies empty software niches and fills them.

Poole in Dorset is where Darren, the name behind Image Software has been developing a veritable cache of high quality software products for the RISC OS platform. Due to its thin-client heritage, the otherwise excellent *Oregano* Web browser from Castle Technology out of Oregan Networks still lacks some features required of a desktop application.

Image Software's *Cassia* and *Nutmeg* servers add to *Oregano* a cache to store files and images locally, allow filtering for user access control, and provide dial-on-demand support from R-Comp's *DialUp* connectivity package. *Nutmeg* additionally allows single pages, areas or complete site hierarchies to be exported from the cache and saved out to disc.

Trying out *Cassia* with *Oregano* on my Risc PC has revealed some interesting timing observations. My chosen test page has a lot of small images and some Flash and other HTML items. With no proxy set, the test page (**www.totalrock.com**) downloads to *Oregano 1.10* on average in 47 seconds.

When I introduce *Cassia*, I get an empty-cache average first download time of 1 minute 10 seconds. So there's a slight time overhead due to disc write access when using the cache over not proxying at all. Subsequent re-loads of the page from Cassia's disc cache only take 21 seconds, so there's useful time saved from using the proxy/cache for re-load or returning to previously viewed pages.

As an experiment, I changed *Oregano*'s !Run file to copy the *Cassia* cache directory to RAM disc and run *Cassia* from there, starting with an empty cache directory each time. The test page average first download time was reduced very slightly to 1 minute 8 seconds, and reload time came out at 19 seconds. However I found that my 4Mb RAM disc filled up quite quickly, giving me a "Disc full" error and never-ending Throbber action.

So unless you have plenty of increasingly scarce and expensive larger Risc PC SIMMS, you may as well let the program install and run to disc as supplied. At only £10 inc VAT, *Cassia* could be your most useful and worthwhile buy this year.

Oregano - http://www.imagesoft.co.uk/

Image Software

Nutmeg

Cassia

POSum

Image Software — Taking you further...

Image Software is a developer of quality software products for the RISC OS platform.

!ImagePrxy

!BigBro

Nuts — to your backups!

Image software from the house of Windsor

Image Software (UK)
sales@imagesoft.co.uk
www.imagesoft.co.uk

In brief

ADSL again

If your phone line failed the ADSL line test I mentioned in the May issue, it may be still eligible for BT Ignite's newer Rate Adaptive Digital Subscriber Line (RADSL), where customers who are between 3.5 and 5.5km from a DSL-equipped exchange can benefit.

The RADSL USB modem reduces the upstream speed as the line noise worsens and quality reduces with increasing distance, while downstream speed remains at a peak of 512Kbps. Have a look at the ADSL Guide's RASDL FAQ, and check out Zen Internet at **www.home.zen.co.uk** who supply RADSL single-user connections for £150 setup and £50 per month exc VAT.

ADSL Guide
www.adslguide.org.uk

Where are you?

One of the more useful functions of the Web is the ability to find the location of a city, town or postal address, and to display a map or aerial photograph of the area. UK maps displayed by **www.streetmap.co.uk** and **www.multimap.com** are derived from the Ordnance Survey maps, so try their own Web mapping service as well.

The Ordnance Survey site gives you the map of a place by name, postcode and shows the numeric National Grid map references with 100km square letter code. There's also a link to **old-maps.co.uk** which can show you a historical map of the area between 1846 and 1899.

Ordnance Survey Maps
www.ordnancesurvey.co.uk

Contacting me

David Dade:
comms@acornuser.com

The right music

Revd. Alan Archer links his hymn book to his bible

Just occasionally there is a piece of software that is so useful that it will make you buy a specific type of computer. This was true of the very first spreadsheet, and buyers flocking to Apple; and to a lesser extent with *Sibelius* and musicians hurrying to buy RISC OS computers.

Nowadays that is much more rare, as most machines can offer something approaching that ideal software but *HolyBible* is, for clergy, getting very near to that position.

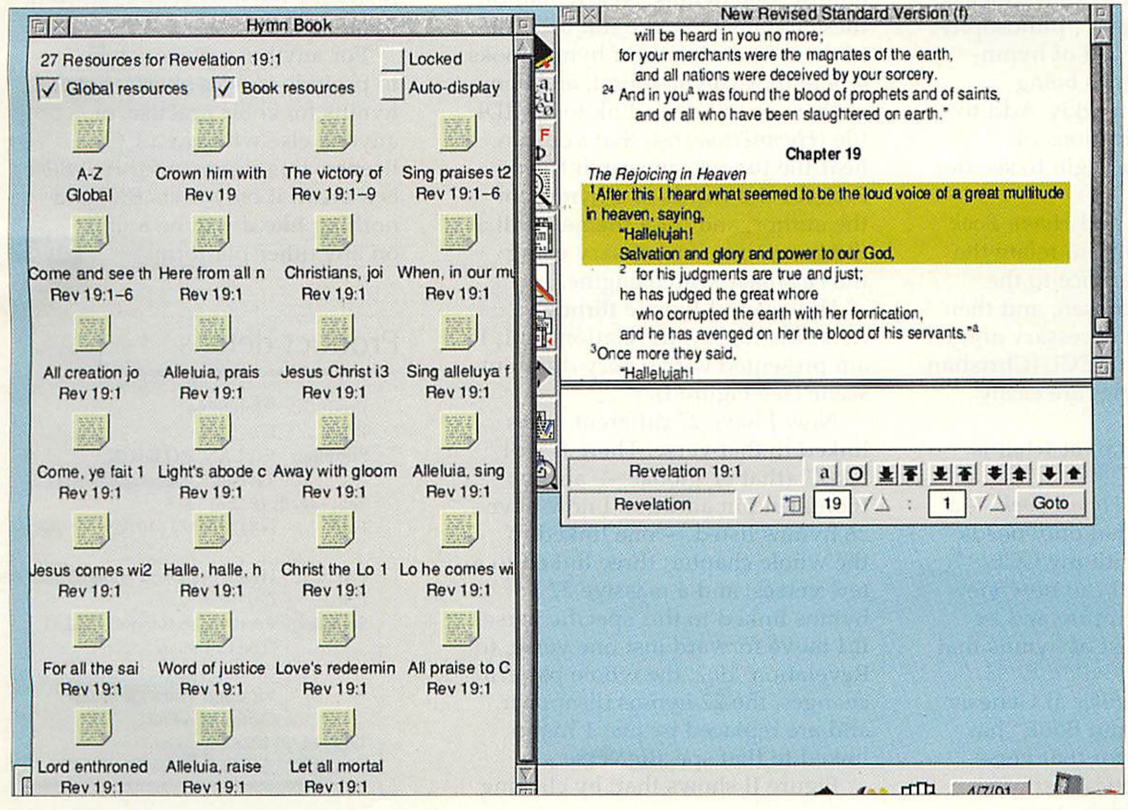
I am a priest, in the Church of England, with three churches, each with very different needs. I know that there are literally hundreds of pieces of software for all sorts of other machines that can give me a full script of the Bible. But *HolyBible* is one of the main reasons for staying with the RISC OS platform, and the latest resource "Hymn Book" from Colin Randall is a facility that has been on my wish-list for a long time.

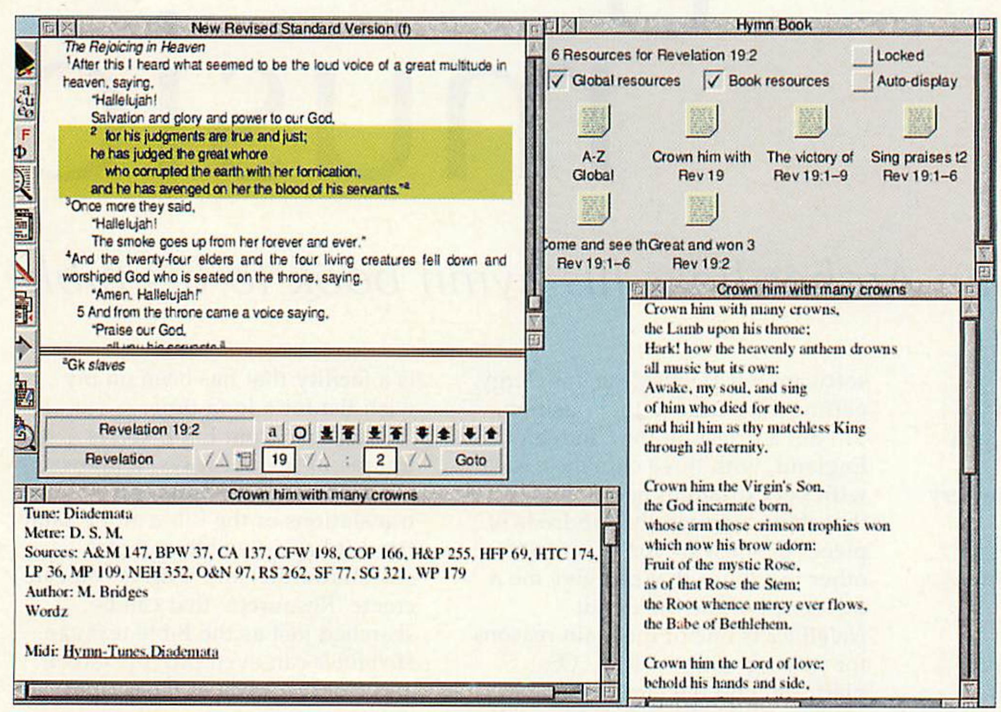
HolyBible from ExpLAN, is unique in several ways. It allows me to have many different translations of the Bible at the same time; it has a flexible and fast search routine; and with it you can create 'Resources' that can be searched just as the Bible text can. *HolyBible* can even provide Greek and Hebrew texts of the scriptures.

The specific resource I am looking at is a Hymn Book — not much to that, you may think, but for anyone who has to produce and print orders of service for occasional and regular use, it is a 'must'.

Imagine me in my study, getting ready for a wedding or funeral. Long gone are the days when a standard book of services, and a near-standard hymn book was all that I needed.

Now the Book of Common Prayer has been replaced by "Common





onto one of the hymns, I can see the text and the additional information for the hymn "Crown him with many crowns".

I can export that hymn in three ways- as a text file to any word processor, or DTP package; or as an *Impression* or *Ovation* DDF file. I can even export it as file for *ResBuild* if I wish to create my own personal resource for *HolyBible*.

The crowning glory is that the software automatically records and remembers that I have used this hymn in a printed document, and will therefore enable me to complete my annual return to CCL. When I have sent off that return, the counters are reset to zero, ready for the next year's return of hymns.

For any busy person, who has to provide service sheets, lists of hymns for choir practise, or anyone else who has a CCL license, this resource for *HolyBible* is a must; it only costs £30, and nothing like it will be found on any other platform. END

Worship", with its flexible "pick & choose", "cut & paste" philosophy; and I have a shelf full of hymn-books, with new ones being published almost weekly. Add to that all the complications of copyright and you begin to see the problems.

What *HolyBible* and *Hymn Book* provide is the ability to relate the hymns used in a service to the specific readings chosen, and then to be sure that the necessary annual copyright returns to CCL (Christian Copyright Licensing) are easily prepared.

Let's look in detail at what is provided:

After installing *Hymn Book* — a simple operation that only needs me to provide it with my CCL licence number — I can now view any passage of scripture and be presented with a list of hymns that are suitable.

If I look in *HolyBible* at Genesis 4:1,I find that "Hymn Book" has only one resource for that verse, "A-Z" the alphabetical list of almost 5000 hymns. Nearly half of these hymns have the full text, all of them have details of hymn books where they can be found, and some of them even have a link to a MIDI file (*Hymn-Tunes*) so that you can hear the tune. I can search *Hymn Book* for the words of a hymn; for the author; and for a theme — all at the same time if necessary using the *HolyBible* search engine.

However, if I move through *HolyBible* to, say, Revelation 19:1, I am presented with a very different scene (see Figure I).

Now I have 27 different items linked to that verse: There is still "A-Z" (that is 'global' — always there), and in addition I now have 26 hymns listed — one linked to the whole chapter; three linked to a few verses; and a massive 22 hymns linked to this specific verse. If I move forward just one verse, to Revelation 19:2, the whole pattern changes, the 22 hymns disappear, and are replaced by just 1 hymn linked to that specific verse.

Figure II shows that, by clicking

Product details

Product: !HolyBible
Price: £70
Supplier: ExpLAN, P.O.Box 32, Tavistock, Devon PL19 8YU
Tel:(+44/0) 1822 613 868
Fax: (+44/0) 1822 610 868

Product: Hymn Book and Hymn-Tunes
Price: £30
Supplier: Revd. Colin Randall, CAUG (The Christian Acorn User Group), Holme Eden Vicarage, Warwick Bridge, Carlisle CA4 8RF
Tel:(+44/0) 1228 560 332
E-mail: carandall@freeuk.com



Increased ki

Mike Tomkinson goes even faster

It has been a long time since I last reviewed a new RISC OS machine. It seems even longer since the actual demise of Acorn and yet I write this on a newly released machine. The fact that I write this on a version of *Publisher* dating from 1996 says something for the longevity of the products and the backward compatibility in terms of the software but more of that later.

The actual machine is a Risc PC. From the outside of the box you would notice little difference from any Risc PC produced since so long ago I do not care to remember. The external design has stood the test of time and it actually looks as good today as it did when launched long ago. Riot shield plastic, easy access, flip front, in fact all that we have come to recognise as a modern design classic. You have to hand it to Castle in that they have stuck gamely to a winner.

So if the outside shows little difference and yet we are talking about a new machine we must be talking about the inside of the box. There is a clue to something different on the front flip cover where it is announced that this is a Kinetic Risc PC 300MHz but once the cover is down you cannot see this tiny clue.

You begin to notice the difference when you switch the computer on. I have just about got used to the time it takes for a modern PC to wind itself up to a state of usefulness from a cold start: go an make a cup of tea and you will probably have plenty of time spare. You barely have time to blink and the Kinetic is ready and waiting. The monitor takes more time to warm up. The time quoted in the Castle literature is less that six seconds from a Control+Break boot. I clocked it at 10 seconds from a cold start.

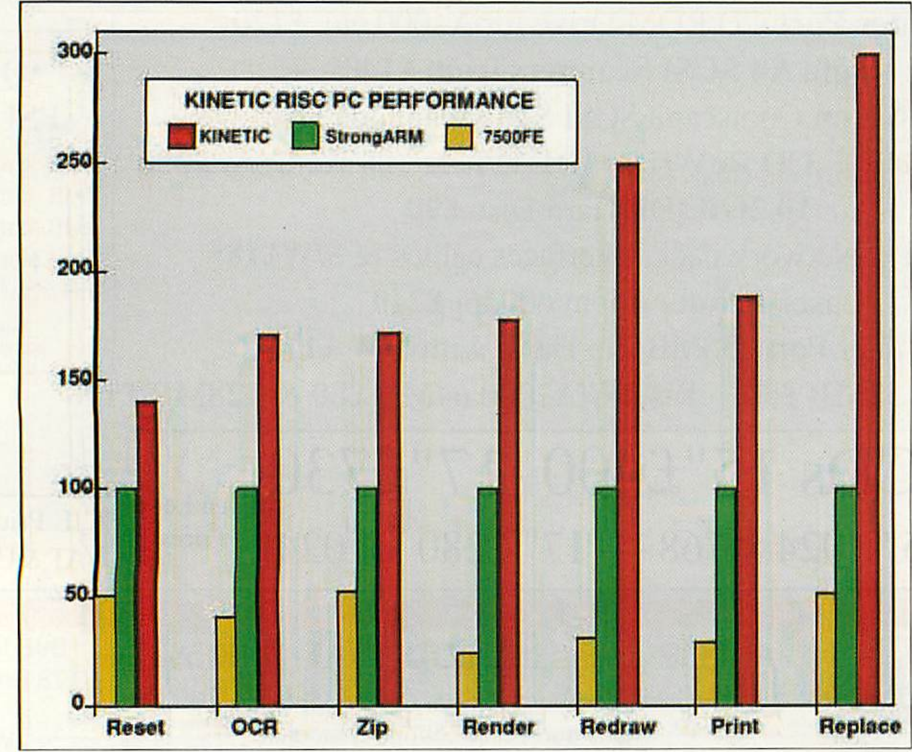
The Kinetic is actually the upgrade board inside the computer. It is available separately for present Risc PC owners and various trade ups make it a more affordable option that a new machine. The board sits in the slot where you might normally find the StrongARM upgrade — but, perhaps more disconcertingly, where you would expect the RISC OS 4 chips there is nothing.

At this point you are looking at a fairly standard RISC OS 4 screen. However, this is where it gets clever. Yes, it is RISC OS 4 or 4.04 to be precise but it is not running from the normal location.

The Kinetic has a system where the OS is loaded directly into the fast SDRAM on board. For the technically minded among you SDRAM is synchronous dynamic random access memory. It is a generic title given to DRAM that is synchronised with the clock speed that the microprocessor is optimised for — in this case the StrongARM Revision T processor. The speed of SDRAM is expressed in MHz rather than nanoseconds.

The loading is done on start up by a ROMLOAD protocol. RISC OS 4.0 is so frugal in comparison to the OS bloatware on CISC PCs that this barely detracts from the total memory you have left for all other tasks. The win is in terms of access time to the OS.

So where does the 300MHz come from? Castle have been creative with the figures here. The StrongARM processor still runs at 233MHz, it is the latest revision T which has been



How the Risc PC performs according to Castle's own figures

netic energy

around for a while now. The SDRAM is 66Mhz and is available in two flavours, 64Mb or 128Mb. 233Mhz+66Mhz gives you the 299Mhz which is nicely rounded to 300Mhz and sounds better. In fact you can also get a 196Mb SDRAM for £199 plus VAT according to the Castle catalogue.

The difference between a Kinetic and a standard Risc PC is in the fact that the OS is running from the SDRAM rather than the standard location on the main board in the RISC OS 4 chips. So does it make that much difference? Well you would certainly see a difference over a 7000+. For a fair comparison you would need to compare it with a standard StrongARM configuration.

Here it is estimated to make an approximate doubling in the speed take to render and redraw and up to four times faster on some other operations. Or looking at it the other way round on a render and redraw it decreases the time taken by half.

This is shown on the accompanying graph taken from the Castle Web site. Given that the RISC OS market has moved an appreciable distance into the computer graphics market that is a significant saving. If you are doing any high end rendering a Kinetic is going to make a significant difference to the time you are sat looking at the screen waiting for something to happen.

Castle have deliberately gone looking for this market and this is reflected in other areas of the Kinetic. It comes with either 10 or 30Gb hard drives. Given the frugality of RISC OS and the files it generates this can only be for very large files of the graphical nature. Nothing I put on the hard disc made a dent on the green line showing how much I had used on the hard disc.

The other win area is in the screen resolution where resolutions of better than 1600x1200 quoted as possible, rather than being the maximum on the standard StrongARM Risc PC.

So far only good news for those looking for a fast Risc PC. Of course this is very much a Risc PC. No USB or PCI slots in sight but that was always a limitation of the architecture of this box. If you do not wish to stray far from RISC OS this is still the best machine around.

The other side

So what are the downsides? There are a few and while some are personal I cannot believe I am the only one who would consider them worthy of comment. My personal pet hate with this machine is the sheer laziness and lack of thought as to what has been put on the hard drive. There is no excuse for some of the rubbish on there.

Does the video sequence of the grainy shots of birds and Shuttle take-off add anything to the machine? I know they were part of the original programs on the Risc PC but there ought to be a bonfire onto which this particular directory should be put. Is it part of some licensing agreement that for the very thick end of a grand you have to put up with this?

That being said there is a up-side in that *Easiwriter Professional* (version 4.08) and *Resultz* (version 1.31/04) are bundled on the machine so you get a word processor and spreadsheet to get you started. There is also a demonstration version of *Oregano*, the Castle Web browser. I



did not hook the Kinetic up to the Internet so can say little about this except that you can upgrade to the full version free, via a voucher in the box, online ... so why not put the full version on the hard disc?

The User Guide is for RISC OS 3.7 and while I agree that the ability to drive this version is probably enough I would hope that there are enough differences in RISC OS 4 for someone to produce a proper User Guide at some stage.

My concern on the hardware side is to question the use of a DVD ROM drive as included on the Kinetic against a standard CD ROM drive. I know it acts as a CD ROM drive but given that it cannot act as a DVD on RISC OS why bother? It is over £50 more expensive than a faster CD rom drive — please someone explain this to me?

My other concern was that, straight out of the box, I could not coax a sound from the Kinetic. No reassuring WaveSynth-Beep or any other beeps for that matter. Another minor gripe is that you no longer get the feet with a Risc PC if you want to use it in tower mode. These are now a £5 extra and given the overall price of the machine this is churlish in the extreme.

Speed up

Still, what it does do it does at a blistering speed. So we come to the main questions — would I buy one or recommend you to do so? This is the fastest Risc PC on the market but note the fact that it is and will only ever be a Risc PC. Anyone still adding PC cards to Risc PCs has my sympathy.

The Kinetic does represent a significant move forward in terms of speed and the longevity of the Risc PC. As you know pure cost comparisons with a PC from your local PC World are misleading. Of course, they are 'cheaper' in terms of the actual money you will part with on day one. But this is not the true measure of the cost.

This is known as the 'total cost of ownership' or TCO. For a PC this will be far higher as it will only have a 'lifetime' of 12-18 months, high depreciation, little or no residual value, a high cost to upgrade in terms of hardware and software and that includes the OS if you wish to keep it current.

A Kinetic DVD 70Mb, 10Gb HD as reviewed will cost you £999 plus VAT. Monitors are extra. You could buy two PCs for that but then again when you look at the TCO you should expect to do so. If you are looking for a pure Risc PC look no further.

Monitor prices have fallen to levels where 19in models are less that £300 and 17in models cost less that 14in models cost two years ago. Do not go for anything less that 17in as size matters in the monitor business — you have to sit and look at it and eyesight never improves with age.

If you already have a Risc PC you should consider the upgrade path. Assuming it is StrongARM and already at RISC OS 4 this will cost you £299 plus VAT. Not bad given that this could be considered the mid-life upgrade for your machine and that it protects your investment in terms of speed probably to the end of its long life.

It costs more if you are not at StrongARM or RISC OS 4 but then you are getting more for your money and will see a greater difference in terms of performance. Bear in mind that now might be a good time to go for a larger hard drive and some more RAM. Both are relatively inexpensive at the moment although SDRAM as used in a Kinetic looks very expensive compared to PC SIMMs.

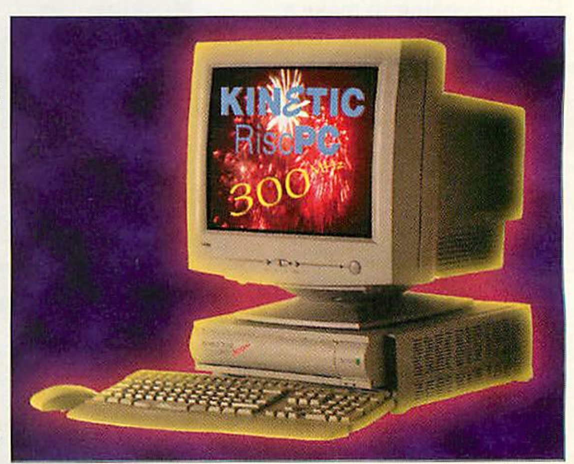
What are the alternatives on the market? Well, I have always had a soft spot for the A7000+ but it now begins to look expensive and has less expansion capability than a Risc PC. RiscStations and Micos are available so we probably have more choice than at any other time as to what to use to access our favourite OS.

My personal gripe is the usual one when discussing RISC OS — the lack of or age of some of the software available for the platform but you could argue that without the machines no one is going to develop software.

As mentioned Castle need to look very closely at what they put on the hard disc of the Kinetic but I suppose what you do not want you can simply delete. Given the size of the hard disc it can hardly be accused of occupying valuable disc space and given the speed of the machine it will not take you long to get rid of what you do not want. END

Product details

Product:	Kinetic Risc PC 300
Price:	£999 plus VAT (70Mb RAM, 10Gb HD, monitor extra)
Supplier:	Castle Technology Ltd, Ore Trading Estate, Woddbridge Road, Framlingham, Suffolk IP13 9LL
Web:	www.castle.org
E-mail:	sales@castle.uk.co
Tel:	+44 (0)1728 723 200
Fax:	08007 839 638



DrawWorks Third Millennium

Main new features in DW 3rd Millennium

Works on all versions of RISC OS from 3.1 onwards including currently proposed future versions. Faster than any previous Millennium version of DrawWorks. Over 50% less processor load than any previous version. Double click an EPS file and it loads into Draw. Autoscroll or manual scroll toolbars. Autoscroll toolbars now move much faster. All features now work with !DrawDA. New microbar with commonly used features. Line width, colour, rotate and scale options always available. Font and pt size menus always available.

New Tools

Export as SVG. Export as PDF (using GhostScript). Writable options for start cap and end cap menus. Nudge buttons for start and end cap triangle options. Freehand drawing mode. DWDistort tool to distort objects visually by dragging. Extract the text from text objects automatically. Export all text objects from a drawfile in one text file. Text Area control tool including font and point size. Change the number of columns in a text area easily and quickly. Set margins, line spacing and paragraph spacing for text areas.

Improvements to existing features

Export GIF with NetSafe colour palette. New moulds for the path moulder. Improved EPS output. Shadow tool auto groups all soft shadow layers. Start cap and end cap menus tick to show current selection. JPEG export tool improved. Re-designed preferences window.

At last!

Available as a full stand alone product, not just as an upgrade, and now with printed manual.



DrawWorks is the leading RISC OS vector graphics program. It integrates with !Draw to provide a professional design package.

A full list of features would probably fill several pages, but as well as DrawWorks itself this new CD includes ***Typography 2500*** with over 350 high quality fonts, ***FontFiend*** font editor, ***MrClippy*** with over 800 pieces of clip art, and much more. Find out more on the APDL web site at

www.apdl.co.uk/isv/dworks.htm

DrawWorks 3rd Millenium now comes with a 60+ page printed manual. This is available separately for existing users for just £7.50 inclusive (UK) plus £1.50 carriage outside UK.

£39

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Planetary

In the first part of this series (July 2001) I introduced my *RawRead* application, this allowed you to extract a bit-mapped image from any file and so read many of the image file formats used by NASA. However, it will not read all image files because it relies on images being one byte per pixel. Now, some of the later missions, especially ones that are more instrumental than photographic, gather their data in much more detail and you can get data sets with 16 or 32 bits per pixel.

For example take one of my favourite data sets, the IRAS Sky Survey Atlas, this is a set of CDs that cover the whole sky in four different infra-red wavelengths: 12, 25, 60 and 100 micron. This was made by a single point sensor for each wavelength looking at a very small patch of the sky.

As the satellite orbited the earth this sensor swept across a fine strip of sky. Then, due to the satellite's motion, the next orbit swept out a different strip of the sky next to the first. Slowly over the next six months the whole sky was covered. Then NASA had to sort out the data into files that covered an area of the sky 12.5 degrees square.

This was repeated over two years so that each part of the sky was photographed four times. Then each photograph was examined for any transient objects like asteroids, comets and planets and these were removed. Finally an average was taken giving a further file representing the sky at that wavelength.

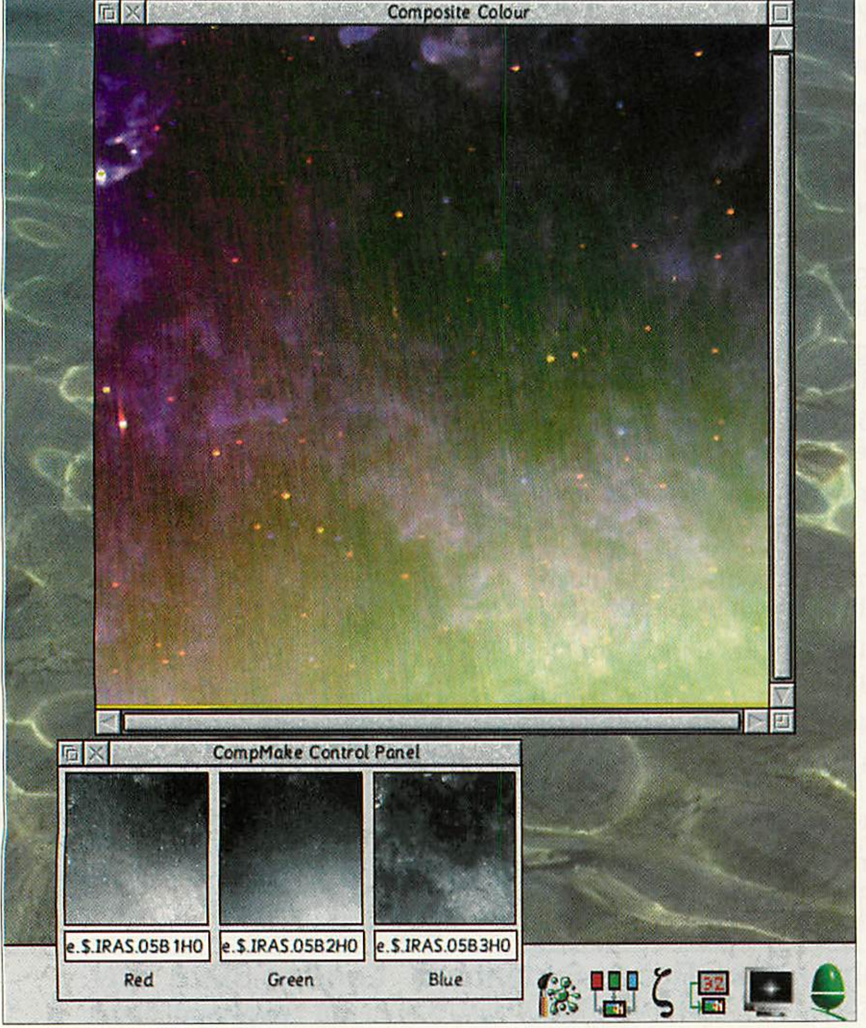
It is necessary to make an image like this because you can't make a lens that works in the medium and far infra-red and also you need to make the measurements from a satellite because the Earth's atmosphere absorbs most wavelengths of infra-red light.

The result is that at the far infra-red the sky looks very different, with great swirls of cloud covering most of the sky, this is called infra-red cirrus. Now NASA supply all the data that go to make up the final average image. I particularly like spotting the transient objects that NASA missed by a technique of flicker photometry, that's when you alternate two images rapidly and the differences blink out at you.

Anyway the point is that the data making up these images is in the form of 16 or 32 byte values and that does not sit very happily with conventional computer display.

You might think that because the computer can use 16 or 32 bits per pixel it will be quite straight forward to cope with, but this is not the case. The problem is that the computer uses these bits to cover all the colours, and in these images the 16 bits cover the intensity of the wavelength being measured.

It's not a colour as we normally know it but we can represent it as a colour. The problem is further



A colour composite image of a 12.5 degree square of the sky taken at three different infra-red wavelengths

suite

Part two of Mike Cook's look at space image processing

compounded by the fact that most of these images do not cover the full range of possible values, so, rather like last month, we have to resort to a bit of histogram processing.

I have tackled the problem in my application called *RawRead32*. This has an interface similar to the earlier *RawRead* but there is a bit more to do in order to drive it properly.

This application assumes you have enough memory so there aren't the low memory options of the earlier programme. The method of getting the image aspect ratio is the same, allowing you to specify the X and Y size as well as the image offset just like before.

However, there are a number of other options to allow for the greater number of variations in the data when you go to multiple bytes. The radio buttons along the left hand side of the control window allow you to set a 16 or 32 bit word; whether the most significant byte or least significant byte is stored first in the file; and if the number is to be treated as a two's complement value, that is ranging over positive and negative values, or simply an unsigned value.

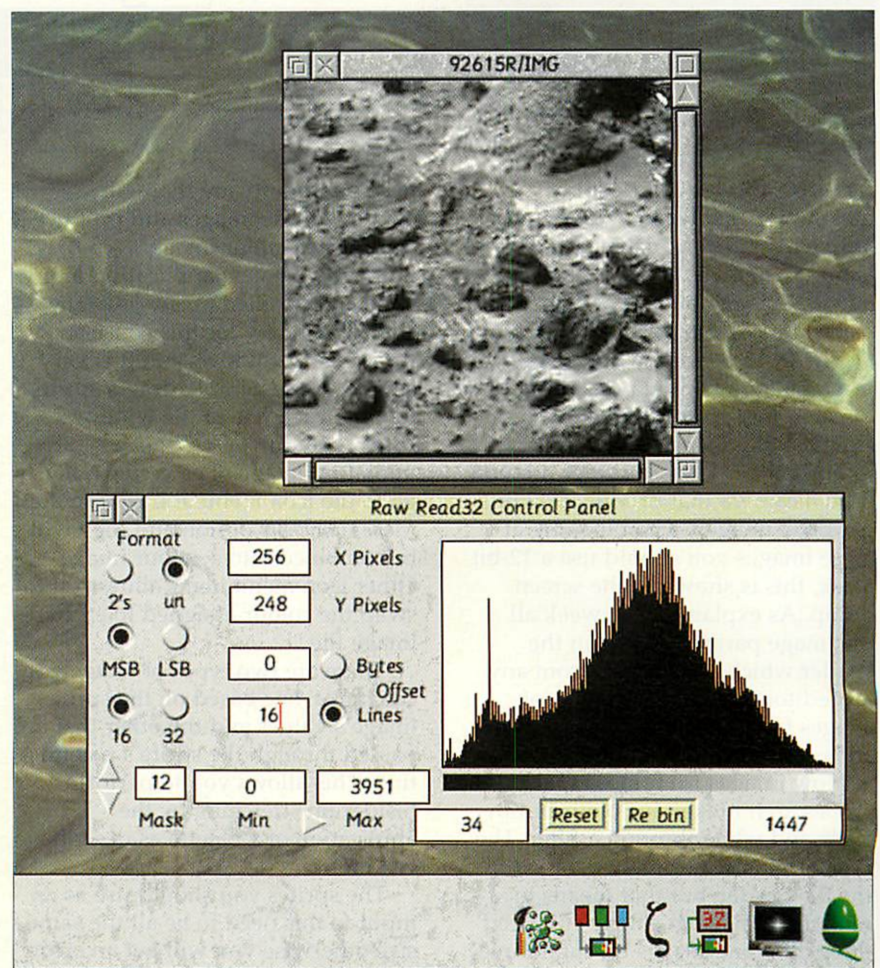
Finally there is a mask number that is to be applied to all numbers before any processing takes place. This is used when the actual values used range over a smaller number of bits that are in each pixel, it ensures the unused bits are blank.

Now when an image is input into the application we get a histogram analysis in the same way as I described last month. However, in addition to the graph there is also a display showing the maximum and minimum values found in the file. Now to convert these values into something we can display the histogram values are grouped into 256 different "bins", each representing a display pixel.

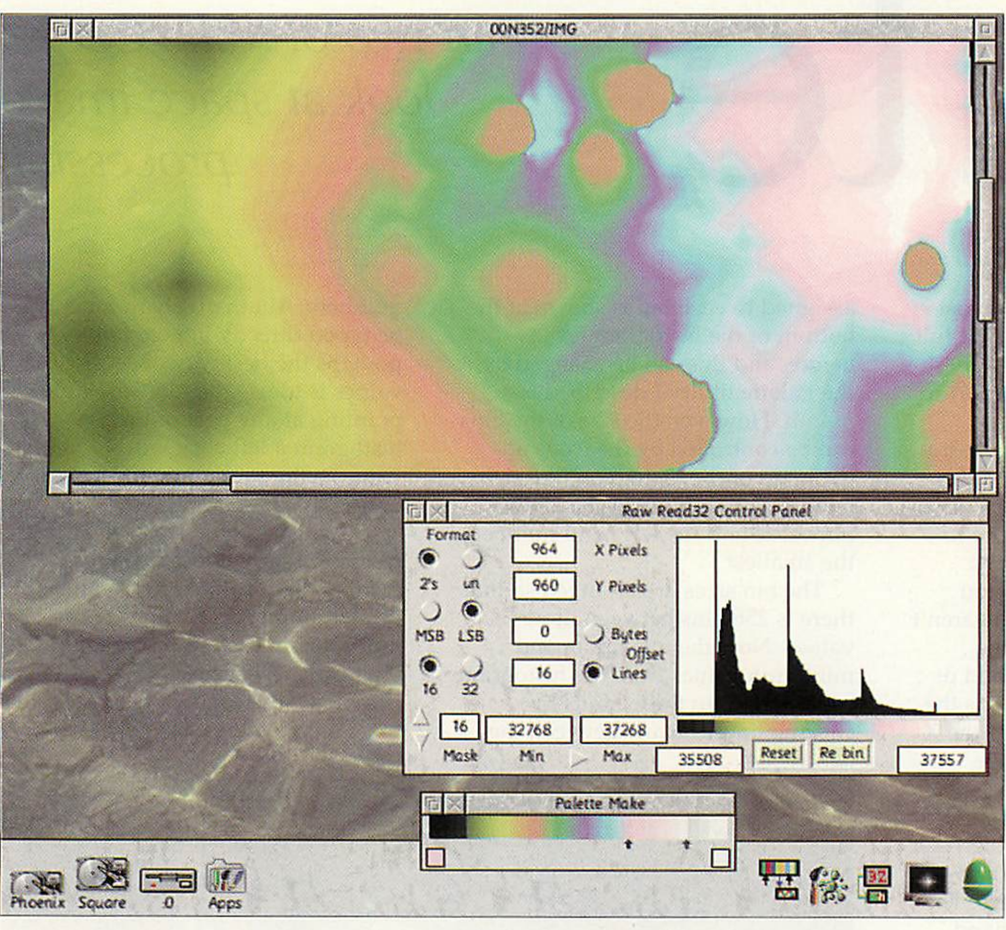
The colour, or grey shade, assigned to each bin is shown at the bottom of the histogram just as before, and this can be changed by the Palette utility I described last month. However, the size of the bins can be controlled by the icons at each end of the histogram, the right hand number showing the largest bin value and the left hand number the smallest.

The bin sizes are arranged so that there is 256 bins between these values. Now the maximum and minimum values from the histogram can be put into these limits by clicking on the arrow between the numbers. Alternatively number may be typed directly in here but, perhaps the best way of setting the values is to use the mouse. While pointing at any part of the histogram a left click will set that value as the minimum and a right one as the maximum.

Having set the values clicking the re-bin button will do the sums and display the result. A click on the reset will put these values to the limits again, then re-bin again to see the results. The trick, like last time, is to make the used values cover all the display values. However, you



A view from the Mars Pathfinder probe with a histogram adjustment to deliver the full range of difference



This shows a height map of part of Mars derived from images taken by the Viking orbiter. Different heights have been assigned different colours to give a contour-like image

can bring out hidden detail by making the displayed values cover only part of the available data values, when you do so values outside this region will be either blacked, or whited, out.

The IRAS is not the only probe to use large number data sets, the Einstein observatory did a very similar thing using X-rays. More recently the Mars Pathfinder mission used a camera that produced 12 bits per pixel images, when looking at these images you should use a 12-bit mask, this is shown in the screen dump. As explained last week all the image parameters are in the header which can be read from any text editor like *Zap*. Examples of images from all these missions were on last month's CD.

Now images from most space probes aren't taken in colour but in black and white through a filter. The type of filter is normally detailed in the file header, but that means to render an image in colour you need three different images through three different coloured filters. Then you need some software that will combine these images and produce a composite colour image.

This is the next application in my suite and is called *CompMake*. The control window for this consists of three small windows and it is very simple to use. Simply drag a sprite file into each one of the windows. When you do you will get a miniature image of each file. Now go to the icon menu and choose the *Make composite* option and they will be combined into a colour image. Other icon menu items allow you to swap the colour assigned to each image file.

There are two types of image you can make, one based on the sprite image's values and the other that are passed through the sprite's palette first. This allows you to perform histogram stretching by the application of a palette as described last month.

The sprites you should use as an input to this need to be all the same size otherwise you will get an error message when you try and make the composite image. The application is also expecting 256 greyscale sprites, that's the type produced by my other applications. Finally the composite colour image may be saved as a sprite file from the image window's menu. The screen dump shows three images of the same part of the sky taken at 12, 25 and 60 micron. I have assigned the shortest wavelength to red and longest to blue, this is the inverse of normal but shows up the detail best. So the red stars are the hottest and the blue stars are the coolest in this picture which is closer to our expectations.

When you create a colour composite image like this, it is called a false colour image, but when the filters match the rendered colours closely is is called a true colour image. In the case of the IRAS images you can't see infra-red so they are all false colour images anyway.

Note this is totally different from the colour images you could make last month using the palette utility, these are known as pseudo-colour images as although there are different colours on the display there is only one imaging, or measuring band, so the colours only indicate different intensity levels. *CompMake* can also be used in Physics lessons to illustrate the mixing of coloured light.

In the final part I will look at compressed images and what range of goodies you can get from NASA.

END

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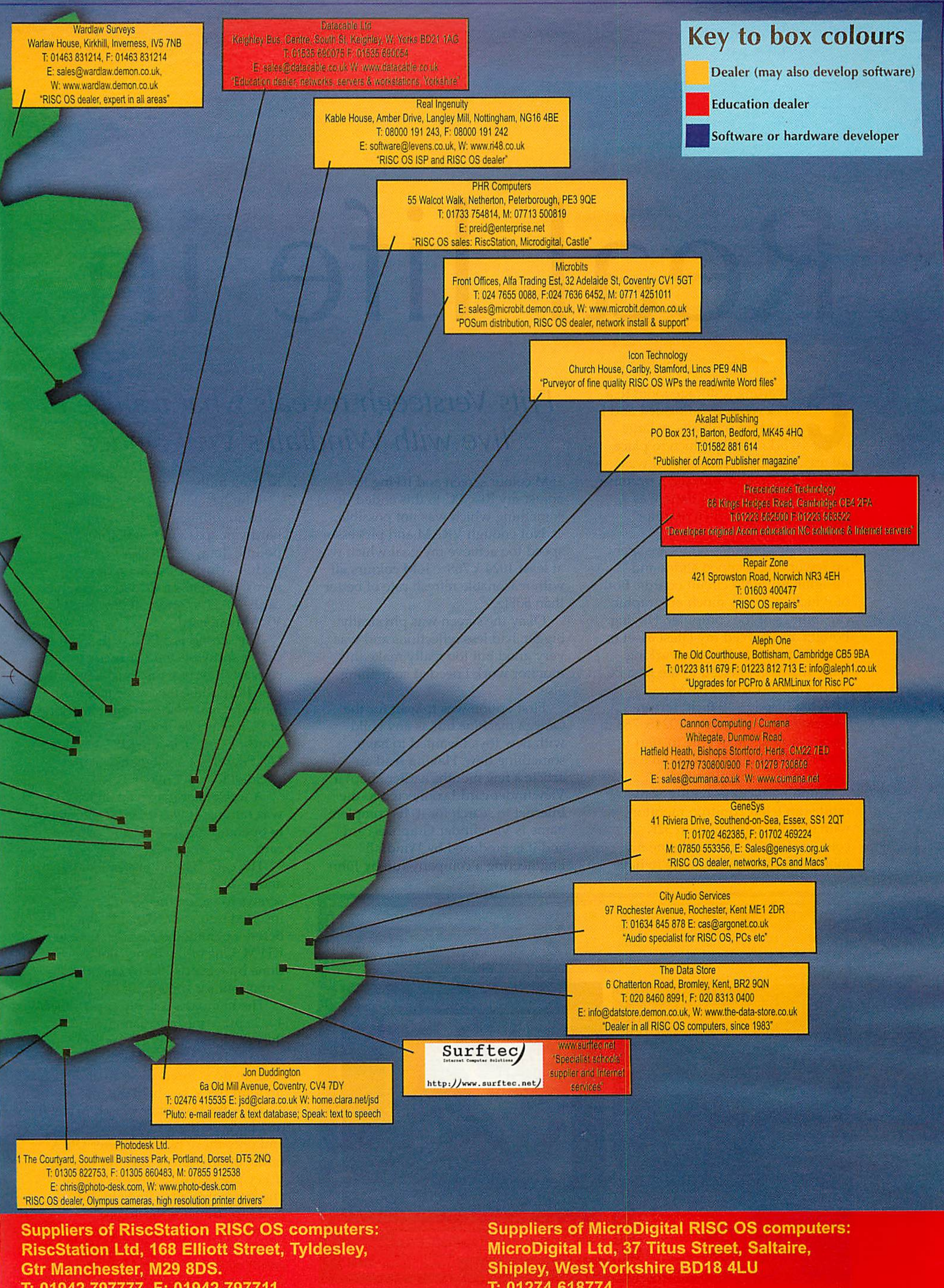
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Real life in

Frits Versteegh reveals what it's like to live with Windfall's ViewFinder

Converting a storage room to a work room was finished and I ended up with a very large workroom in which to place all my computer stuff. Now it was time to buy a new monitor, a promise I made to myself, now there was space to place a 19 inch monitor screen.

A lot of computer hours are spent on reworking scanned slides and designing printed circuit boards. Both of which rely very much on graphic capabilities of the computer. Having bought and moved my latest asset (a really big box) to its new working place it was connected to the Risc PC with a limited 2Mb VRAM.

A big (used to 15 inch) screen presented my old screen 1024 x 768 in usual colours. Okay time to start up my Photodesk program and have a look at some previous work.

Stunning pictures on my Sony multiscan E400 Trinitron monitor with 0.24 pitch but only in 32K colours. Time to tune, redefine my monitor MDF files. Wanting to have 16M colour screen and trying to adjust my Risc PC to this ended up in something which was not possible.

Not enough VRAM and processor speed too achieve my goal which was at least 1024 x 768 x 16M colours all with reasonable refresh rate of better than 80Hz.

Okay the screen was physically bigger, had less reflections and was very good but too really make this monitor work I needed something else.

First option was to wait for the Omega machine but as any child with new toys I wanted to have something now. Having read an article a few months earlier about a Viewfinder card I connected to the Internet to search for it. Its complete name is Viewfinder Graphics card and it is produced by Windfall Engineering a company run by John Kortink in the Netherlands.

John has written several good software utilities like *Translator* and hardware like a video digitiser podule (long ago). The VFcard is a podule which is made up of two items, the first is a PC video graphics card — ATI Xpert 98 AGP with 8Mb VRAM onboard.

The second is a PCB with some driver software and hardware to convert/interface the signals from the Risc PC podule bus. Time to e-mail John and ask what about the working of PCPro as I do use the PC Card almost as much as the RISC OS side. Next day I got a good answer and decided to order one.

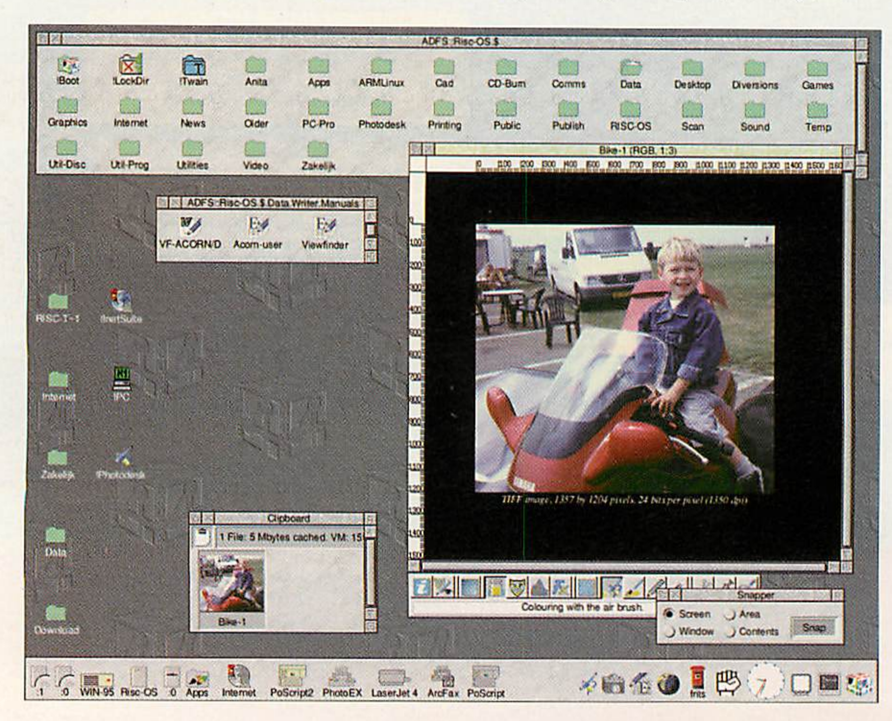
A week later it arrived and, as it was raining, it was a perfect moment to open up the Risc PC and add the card.

The card is build professionally and is delivered with the mounting screws to secure the podule once inserted into your RISC PC. But before opening the Risc PC, time to RTFM. One of the things not much done by wizards like us but important for something like this.

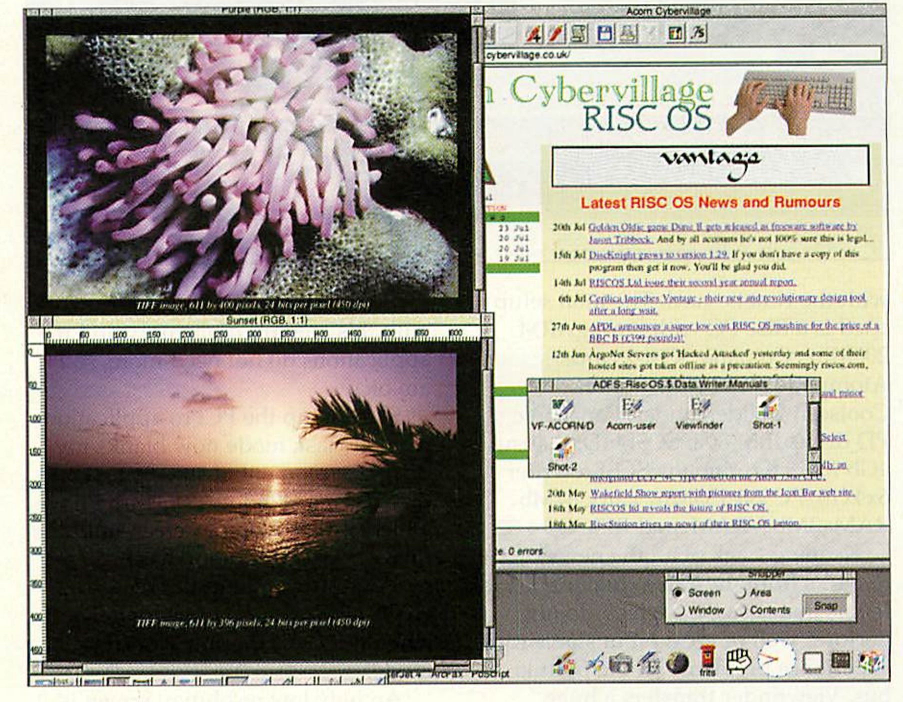
The manual is a really small sheet: 4 x 2 cm. A one line manual? Almost, the card looks designed for the wizards because the first thing you have to do is insert the card and boot up with the V key held down.

The card should be placed in slot 0 or 1 because it uses DMA extensive and only those two slots offer DMA (more on this later). Booting with the V key pressed disables the VFcard and presents your same old dull desktop. Time for the second instruction of the manual press Control+F12. This opens up your editor with a command line and you type the command:

```
ViewfinderGuide
```



iving colour



Now a real manual, one you can not lose, appears in your screen and you can print this and read it with a cup of coffee/tea. After reading it I followed the instructions and connected my Sony E400 to the VFcard and booted without the V pressed. My normal screen appeared and there was a new icon on the menu bar.

This gives access to very much higher screen resolutions. The menu gives you a wide choice of different high resolution screen modes sorted by colour with high refresh rate. Here are just a few examples:

1920 x 1440 x 32K (or 256 or 16 colours) 66 Hz

1600 x 1200 x 16M colours 82 Hz

1280 x 1024 x 16M colours 107 Hz

1024 x 768 x 32K colours 135 Hz

All of these modes can be changed by the user and you can add and delete your modes easy, all within the limits of the card. Choosing a mode is as easy as it is with your normal icon which is next to it. There is a command to get rid of your old Display Manager.

Testing several modes produced no problems in my setup. All screen modes are very crisp and show lots of detail with good colours. The Viewfinder mailing list (which can be found on Yahoo) mentioned something about the image sometimes being a bit blurry.

The image I viewed was not blurred at all, suspect it has to do with the connecting cable between monitor and VFcard. The quality of the cable becomes a major issue when using these high resolution modes. Be careful if you use switchboxes as a lot of them will give noticeable loss of quality.

The RISC OS desktop looked very impressive once I decided to use 1280 x 1024 x 16M colours at 86 Hz refresh rate — the maximum rate my Sony monitor will accept. Once decided you want to start up with the Viewfinder card you can also set the resolution it uses.

This is done by manually editing a boot file. Finally booting up the machine now produces a very nice picture and it's time to test my most frequent used software packages. All of them work fine, but here's a short overview:

Riscript: A4 documents can be seen almost lifesize, speed of Riscript is mostly determined by used fonts and handling of those no extra delays noticed;

Impression: Very nice DTP now as pictures and size are greatly improved;

Photodesk: Not possible to view picture without frames (full screen), minor negative point. A real joy now to see your work. Screens are redrawn a bit slower but there is a lot of data extra now;

ANT Internet: Redrawing up of large screens sometimes a bit slower but overall image is again much better;

Easywriter: Redrawing of screen a bit slower when inserting / editing text;

ChangeFSI: Now produces stunning decoding of digital images of all kinds;

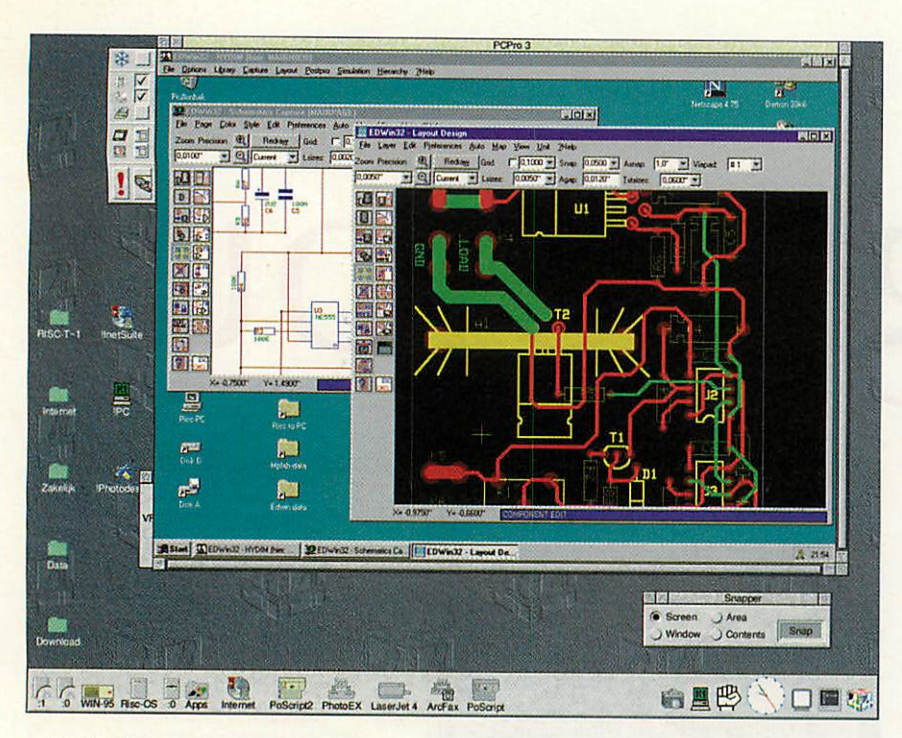
CD Burn: No problems, you can open more windows now and still see each of them. More important, no timing problems on my SCSI bus. Having written a few CD's at full (6X) speed since VFcard's installation without problems;

StrongED: Just used for basic editing and experienced no weird things.

Overall all my applications work as they did before but all with much nicer graphics. Important also my hardware looks okay. Using my Photodesk set up with the Nikon scanner revealed a problem. The scanner did not work at all.

Testing revealed that when booting in Viewfinder disabled mode, it did work okay. After looking in my SCSI manager setup I made an adjustment to prevent block transfers. The scanner now works again.

There is a command available which sets the way DMA is used by the card. You need to use this command to make the VFcard work



with the Kinetic card. The total setup used is a Risc PC with StrongARM 200Mhz; Cumana SCSI-2 card; Atomwide serial card; Nikon Coolscan-2 slidescanner; Panasonic PD drive; IBM 8Gb SCSI HD; Fujitsu 4Gb IDE HD; Yamaha SCSI rewriter 6x4x16; PC586-133Mhz card; 64Mb RAM; 2Mb VRAM; and RISCOS 4.02.

Keeping track of all the news remarks from the Yahoo mailing list it seems that Risc PC's which do not perform well or are a bit unstable can experience problems on the podule bus. Viewfinder transfers a huge amount of data along that bus which in theory should not influence other operations.

Another thread suggested *Zap* was slow with the VFcard. John Kortink published a new version Flash file for the card — the card's software can be updated in place — and *Zap* is faster still. The VFcard only listens to RISC OS commands. This means that certain very few applications which directly access screen memory fail to work with this card. Those applications need to be updated to make them work.

The RISC OS part of the RISC PC passed the test. What about the PCcard? Starting PCPro blanked the display, showed the start-up screen (text only) and froze the system. Nothing happened, remembering several messages in the mailing list about memory problems with this application I reset the Risc PC and changed the memory allocated to PCpro.

I tested several settings and ended up with 28Mb which is 4Mb less than it was before. Windows 95 does work with this amount of memory and my applications do not need more, so I am okay.

Starting up the PCPro application in single task mode now blanks my display a moment of startup text and then during Windows start-up I have a flickering / flashing screen until the final desktop resolution has been set by Windows. Once in the Windows 95 OS all works as before no news here until I exit the single tasking mode.

An ugly low resolution screen is presented sometimes with a icon seldom seen in RISC OS tells you to wait, then one click of the mouse followed by F12 and a Return brings back the familiar Viewfinder desktop. You can also start-up the PC in multitasking mode and go to single task and leave by quitting the PCPro application on the menu bar. Leaving the PCPro environment could be better.

The VFcard has flash memory on board. So it can be updated with new, extra or better routines and commands in future while it is in your machine. Since its release several updates have been provided by John Kortink via the Internet. The version tested here is V1.28.

Also the card takes over some RISC OS software graphics routines and performs them in hardware, some of them with 1100% increase in speed. Applications like Artworks and ProCAD should benefit from this but I could not test this.

The original Risc PC VIDC chip is put in a standby mode and displays a message that you should look at the VFcards output. It would be nice if the original video output could be used to display something else like different views, enlargements of screen parts or whatever you can think of. Something for the future maybe?

As the construction of the podule can take other graphics cards Viewfinder is a card which can be updated as long as there are PC Graphic cards and Windfall Engineering software support. At this time of writing already there is new Flash file available as the AGP video card has been downgraded, yes this no typo. It's not dramatic but the strength of Flash files is now proven. Almost forgot, you do not need your VRAM to drive the VFcard. So if you wanted better screenmodes you can better buy the VFcard then some chips (in most cases true).

Having spend a lot of hours again in front of my new Desktop I am very pleased with this VFcard which gave my Risc PC a new life. The desktop does not give a moment the feeling that it is slow, John describes it has smooth, it is. Keep in mind that building a large screen like the one set on my Risc PC eats a lot of new gained speed away. So I gained a much better screen quality not speed.

Spending a morning with the VFcard removed, showed a slightly faster desktop but within 10 minutes that feeling went away. The VFcard lives up to its promise and certainly gives us RISC OS users a desktop which we can show our fellow PC men without shame.

Are there no negative points to this VFcard? Not much, the price is higher than in the PC world but it is worth a very good monitor. The price of the VFcard is reduced since the RISC EXPO in the Netherlands. PCPro with only 28 Mb? looks like a software bug and to be corrected in a future flash version. I now have a very well performing Risc PC with new vitamins, a combination which performed year after year and will do a few more now. **END**

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All in a name

Neil Spellings explains absolutely everything about domain names

We are all familiar with the concept of the Internet, Web pages, e-mail, FTP, but have you ever wondered what goes on behind the scenes? What happens when you type a URL into your web browser? How does your computer know which server to connect to? Which server hosts the Web site which you wish to view? How does e-mail find its way into your mailbox and not one of the other millions of Internet users out there?

In this article, I hope to demystify some of the technologies and jargon surrounding domain names, Web hosting and how data gets from **A.com** to **B.com** — to bring the phrase into the 21st century.

Firstly, some basics. I'll be referring to these a great deal throughout these pages so we'll need a good understanding of them from the start. Some may seem obvious, especially if you're a hardened Internet user, but an understanding of these are important for less familiar users.

Domain

Think of a domain in geological terms. We refer to "your domain" when talking about territory — the Internet is no different — it's like an address. There are several levels of domain on the Internet. "Top Level Domains", TLDs, are like countries — they are the first level of segmentation of the Internet. Some examples of TLDs are .COM, .UK, .ORG, .AU

Each country has their own TLD assigned to them, and there are some generic TLDs which anyone can use (the extremely popular .COM being one of them)

Second level domain

These are the next division which sit under the TLDs — think of them like the counties within a country. Depending on which TLD you are under, you may be able to register your own second level domain name (more on registration later). Some SLDs are: **spellings.net**, **.co.uk**, **riscos.com**

Sub-domain

A sub-domain is normally the first level of the domain name. For example. "www" is a sub-domain in **www.spellings.net**. Sub-domains usually don't have to be registered if you are the owner of the second level domain.

Some companies do offer sub-domain registration, where they are expanding the number of possible domains you can register.

For example, you can register sub-domains under **uk.com** SLD like **spellings.uk.com**. You may choose this option if the TLD **spellings.com** is already registered.

IP address

Every host (the term for an Internet-connected device, PC, server or router) has a unique IP (Internet Protocol) address. IP addresses take the form of four numbers separated by a "." for example: 212.69.206.29

It is probably worth noting that this current set-up, where each of the four numbers can be 0-255, is becoming insufficient to cope with the number of machines available. This is IP4 with a mere 4 billion options and there are moves afoot to extend this to cope with more.

DNS

The Domain Name System is a crucial part of how the Internet operates, and gives anonymous servers a simple name so we don't have to remember large string of numbers (the IP addresses mentioned above) when we want to visit a Web site.

When we are talking about domains, the term DNS will crop up frequently, this is a *domain name server* which is specifically tasked translating these IP addresses into the domain names we are all familiar with. This process is known as a DNS lookup.

Now we've learnt a few of the basics, let's go through the process of setting up our own domain name and Web site, and how someone on the other side of the world might view it once it's up and running.

All in the name

The first step on the road to an Internet presence is to choose your domain name. This may sound easy, but there are many things which you need to take into account when choosing your domain name:

• What TLD are you going to register it under?

If you are a global company or organisation, or you are registering a personal or family domain name, you may wish to go for a country neutral .COM or .NET. For a UK-based company or organisation, .CO.UK or .ORG.UK may be more suitable. There are hundreds of TLDs to choose from, and some new ones about to released including .info, .biz and .name

• Is it available to register?

If you are registering a domain under one of the more popular TLDs such as .COM or .CO.UK, you may well find that the domain you wish to register is already in use. If this is the case you have several options:

a) If the person who has registered it has no right to use it, you may take them to arbitration to get the domain transferred to yourself. This course of action would require that the domain name contained your company name or a registered trademark you own. If not, you may have no choice but to consider one of the other following options.

b) If the domain name is registered but not being used for a site (it is "parked" — registered but not being used), consider contacting the registrant to see if they are willing to part with, or sell the domain onto you. Beware of "cyber-squatters" who register domain names in bulk with no intention of using them only to extract exorbitant fees from the legitimate owner.

c) Choose a variation of your domain name which is available (for example, add hyphens where domains contain multiple worlds, or add words such as "online" or "net" (for example, if **mycompany.com** is taken I could try **my-company.com** or **mycompanyonline.com**)

d) Choose a different TLD where your desired domain name is available. There are literally hundreds of TLDs to choose from, although some are harder to register than others.

• Is it easily memorable?

When choosing a domain name, you want it to stick in the minds of your visitors (or potential customers if you are creating a business site). Having a domain name too complex or too long to remember is going

to mean people wont remeber your site URL and will have to resort to using search engines to find your site.

• Does it infringe on anyone else's trademark or company name?

If the name you are registering contains your own company name, organisation name or trademark, you are normally safe to proceed.

However, if the above is not the case, there may be someone else with such a company name or trademark, who may object to your registration if they have a more legitimate right to use the name. Where there are two parties "laying claim" to the same domain name, an arbitration committee can decide on who the rightful owner should be.

Choosing a registrar

Once you've decided the domain name you wish to register, you need to find a registrar who can perform the registration for you. There are literally hundreds of domain registrars on the Internet to choose from, so you need to choose one that best suits your requirements. Some things to think about when choosing a registrar:

• If you also wish to host a Web site, do they provide Web hosting services?

• Do they charge to transfer your domain to another provider? There are some companies who will register your domain for a very low price (some even for free) but if you then wish to "make use" of your domain they charge you often exorbitant fees to transfer it to another Web hosting provider.

• Does the registrar make themselves the legal owners? You should always be the legal owner otherwise you risk losing the domain if the registrar closes down or go bankrupt at a later date.

• What additional services or features can they offer? If you are registering your domain for a commercial Web site, you may wish to host an online shop, mailing list, database or sub-domain. If you will require such features, make sure your registrar can provide them.

Using your domain

Once your have chosen your registrar, you need to decide on what hosting option to take. Most commonly you will be registering your domain to link it to a Web site and e-mail address. There are a variety of hosting options in this area which we will discuss next.

You may just be registering the domain to "stake your claim" on it, and have no immediate plans to make use of it for a Web site or e-mail, in which case you are just "parking" it until the time arises and you decide to utilise it. When you register a domain name, most registrars give you a choice of how you wish to use it. Here are a few explanations of some of the facilities and features you may see.

E-mail/Web forwarding

Many domain registrars don't provide Web hosting services — instead they forward your domain URL onto a URL which you specify at the time of registration. People often use the free Web space that their ISP provides as this URL. The advantage of this is you can host a Web site at minimal cost without having to pay for any specific web hosting.

The disadvantage of this is that a domain that forwards onto an ISP's site does not look professional, especially if the site is a business or corporate one. Also, as you are using the ISPs Web space, they have no obligation to provide a reliable service as you are getting it for free. They might not backup the server, or it may be taken down for maintenance without warning.

E-mail forwarding is provided by most registrars, and automatically forwards any e-mail sent to your domain name to an e-mail address you specify at registration time. This allows you to receive domain e-mail without having to make changes to your e-mail software or its configuration.

Web hosting

If you do not wish to have your domain URL forwarded to another site, you will need some Web space. Most hosting companies allocate you Web space by the megabyte. How much space you'll need will depend on the type of Web site you have. For most sites, 5Mb is adequate, and if your site only has a few pages you may get away with as little as 1Mb. However, if you wish to provide software downloads or host large numbers of images or other files you may need more space.

The CGI-BIN

A cgi-bin is a special area on a Web site which can be used to run scripts. Many hosting companies provide a standard set of cgi-scripts that are available to use on your site (*mailform* is a common one — it allows you to add an e-mail response form to your Web site).

If you want the flexibility to add other scripts (either those freely downloadable on the Internet, or ones you have written yourself) you will need your own cgi-bin folder setting up on your site.

POP3 mailboxes

Sometimes you might not want to rely on your ISP to provide e-mail services for your domain. This is especially the case if domain e-mail is to be delivered to an office environment, where regular ISP-provided POP3 mailboxes are not sufficient.

POP3 mailboxes allow e-mail to be delivered directly into your domain without any forwarding taking place. Domain mailboxes require you to configure your software to connect to the new mailbox and download the e-mail in addition to your regular ISP mailbox.

PHP

PHP is a "server side" scripting language which is rapidly gaining in popularity. Server side means that the scripts are processed on the Web server before the page is sent to the Web browser, which means you can create quite complex and interactive Web sites without having to rely on any particular features of the Web browser such as Java script. PHP also provides many facilities for manipulating images, managing sessions and connecting to databases.

Finding your site

So you've chosen your registrar, submitted your registration and chosen your hosting options — what happens next? Let us take a look at what happens behind the scenes to get your domain name available on the Internet.

Depending on which TLD you chose, this process differs slightly, although the general idea is the same. For the popular TLD's such as .COM, .NET and .ORG, your registrar will register your domain name with one of the 80 or so worldwide ICANN (The Internet Corporation for Assigned Names and Numbers) accredited registrars (or they may be one themselves). These are companies who are specially licensed to register those TLDs.

For other TLDs such as .UK, the registrar will register the name directly with the particular organisation who "owns" that TLD. In this case, Nominet are the company who look after the .UK TLD.

One you have parted with your cash, your domain name will be added to one of the "root" DNS servers on the Internet. There are several root servers for each TLD (for .COM there are about 26, .UK there are 4). These are huge databases which store all the second level domains registered under their own respective TLD.

Each domain name registered gets its own WHOIS record in this database. This process can take from 24 to 48 hours, so newly registered domain names can take a while to become available.

Domain names

Domain registration with forwarding

2 year registrations

Price	Domains
£20 +VAT	.CO.UK, .ORG.UK
£40 +VAT	.COM, .NET, .ORG
£65 +VAT	.UK.COM, .GB.COM, .UK.NET, .GB.NET

Price includes :

- Domain registration fees
- DNS Hosting
- Email forwarding
- URL forwarding

.COM, .ORG and .NET long-term

1 year only	£25
5 years	£100
10 years	£180

Domain Extras :

POP3 mailboxes	£10
Mailing list	£50
Auto-responder	£20
Transparent forwarding	£10

Web hosting

Domain registration with hosting
Take above prices and add :

Price	Site
+£25 +VAT	1Mb site
+£45 +VAT	5Mb site
+£70 +VAT	10Mb site

Includes :

- Domain registration fees
- DNS Hosting
- Email forwarding
- Web site hosting

Hosting Extras :

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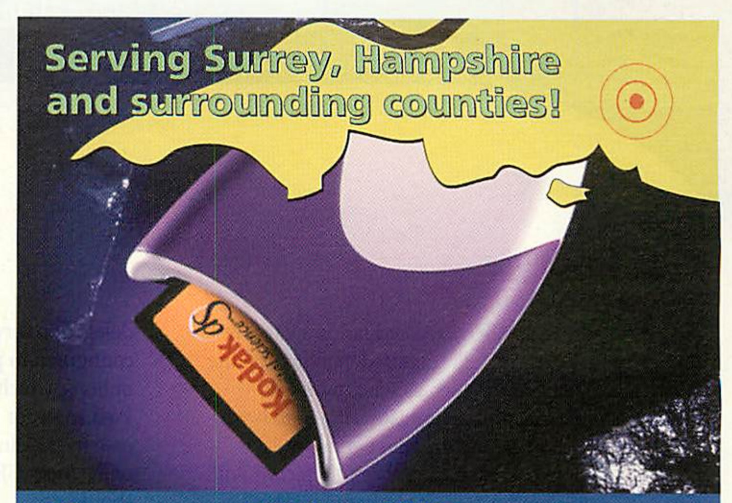
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When the software has been loaded, just treat the media like a floppy disc, you can copy, delete and rename files while on the CompactFlash or SmartMedia cards.

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CompactFlash Reader (inc Acorn driver) *Available NOW!*	£ 79
SmartMedia Reader (inc Acorn driver) *Due for release soon...*	£ 79
Acorn RISC OS/NC Driver*	£ 39
340MB IBM MicroDrive	**£POA**
1GB IBM MicroDrive	**£POA**

* Surftec driver will not work with all types of card reader, and requires a bi-directional parallel port.



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Each WHOIS record holds a varying amount of detail, again depending on the TLD. Details such as who owns the domain, who administers it, when it was registered, and when it expires are common entries. The WHOIS record will also hold details of at least two DNS servers (the primary and secondary) that know a lot more about that particular domain. These are known as the "DNS delegation" servers: the servers that all requests made to that domain name should be forwarded, or delegated to.

You can query the WHOIS records directly. Many of the registrar Web sites allow you to perform a "WHOIS" lookup on a particular domain name. This is most commonly used to find whether a particular domain name is available for registration, and is simply querying and displaying the WHOIS record from the WHOIS database on the master server for that TLD.

DNS records, delegation

The DNS delegation servers specified in your WHOIS record are the servers which decide where to direct requests for all the different services that could reside on your domain such as Web, e-mail, FTP and so on. These are stored in the form of DNS records.

The main DNS record is known as the "A" record, which provides the main IP address to name translation for the domain name. Another important record is the MX record (Mail eXchange) which provides the hostname of the mail server which all e-mail sent to that domain is to be sent. Finally, CNAME (Canonical Name) records describe sub-domain definitions under the second level domain.



To explain this a little further, here are the DNS records from the DNS server which hosts **spellings.net** :

Record	Type	Data
spellings.net	MX5	spellings.net.
spellings.net	A	212.69.206.29
smtp.spellings.net	CNAME	spellings.net.
ftp.spellings.net	CNAME	spellings.net.
mail.spellings.net	CNAME	spellings.net.

As you can see from the above, all the services (CNAME records) for **spellings.net** (Web, e-mail and FTP) are all hosted on the same server: **spellings.net** which in turn resolves (using the A record) to 212.69.206.29 — the IP address of my hosting server.

Once the DNS record for your newly registered domain has propagated to the root servers, and the DNS records have been set-up on the hosts own DNS delegation server, a Web server can then be configured to provide your chosen hosting options, which may be a hosted site with Web space, or URL forwarding in which case the hosting webserver just responds with a new URL to which the web browser should go.

DNS lookup

So now we have our domain registered, the WHOIS and DNS records have been set up by the registrars or hosting company and we have either a Web hosting agreement or we are using URL forwarding. How does someone who can be sitting at any Internet-connected PC find their way to the server which hosts the Web site?

We'll now take a look behind the scenes at how a domain name gets resolved to an IP address. In the following example, we're going to use a Microsoft employee who has heard how good RISC OS is and wants to find out some more information. They decide to visit the RISC OS Ltd Web site, and such type the URL **http://www.riscos.com** into their Web browser.

Firstly, its important to realise that the PC which the user is seated at will also be a member of a domain. As the user is a Microsoft employee in the sales department his PCs domain might be sales.microsoft.com being on a corporate network.

For a non-corporate dial-up user, their domain is usually that of their ISP, so for example a user of the AAUGOnline ISP will be a member of **aaugonline.net**.

Each Internet-connected PC is configured with at least two DNS servers (often called primary and secondary "nameservers" by ISPs). For dial-up connections, these can either be "server assigned" in which case the PC is informed of them during the connection process, or hard-coded in the ISP connection script. For corporate networks, these will normally be configured by the network administrators for all PCs on their network.

1. When the user types **http://www.riscos.com** into their Web browser, the first server to be contacted is the primary DNS server for the domain the user is a member of, in this case **sales.microsoft.com**.

If for some reason the primary server does not respond (it may be down for maintenance) the client will contact the secondary. If that doesn't respond either, the client will get a "host name not found" message in their browser — a similar message to when you enter a domain name which does not exist.

2. Because a DNS server for any domain only knows about the hosts and servers in its own sub-domain (known as its "zone"), the Microsoft sales departments' DNS server has no knowledge of **riscos.com**. The only hosts it knows about are in the **sales.microsoft.com** zone so it passes the request onto the DNS server for the zone around it, **microsoft.com**.

3. This server faces the same problem, although it knows about many more hosts than the sales DNS server, it still has never heard of **riscos.com**, so again it forwards the request onto the zone around it.

4. As **microsoft.com** is a second level domain, its zone parent will be one of the root DNS servers for the .COM TLD. For reference, these master servers are all actually in their own domain GTLD-SERVERS.NET and each server has a different sub-domain, starting with A and going through to M. (eg A.GTLD-SERVERS.NET, B.GTLD-SERVERS.NET etc)

5. This root server knows about all the second level domains, including **riscos.com**, and responds back to the 7 DNS server with the IP address of the DNS server which hosts **www.riscos.com** (194.200.2.231). The **microsoft.com** DNS server then forwards this to the **sales.microsoft.com** DNS server, which in turn forwards it to the client PC.

6. The client PC now has an IP address it can contact, so it sends a request to that IP address. As this is the **riscos.com** DNS server, and the client is requesting **www.riscos.com**, it knows to direct the request to the Web server (the www CNAME record). It is only now that the user sitting in Microsoft sees the RISC OS Ltd Web site in their browser.

This may all seem incredibly long-winded, but all these servers work remarkably quickly and can respond to each other in a matter if milliseconds. Also, DNS servers hold caches of recently resolved names, so if someone else in Microsoft were to enter **www.riscos.com** in their Web browser, the DNS server now already knows where to send this request to as its already performed this lookup in the past and has cached it, speeding up the subsequent request.

Hopefully you now have a better understanding of what is involved in registering your own domain name, hosting a Web site and how Internet traffic is directed to your site once setup.

Neil Spellings is chairman of the Association of Acorn Usergroups (AAUG), and is also Managing Director of Spellings Computer Services Ltd, which provides, among other things, domain registration, Web design and hosting.

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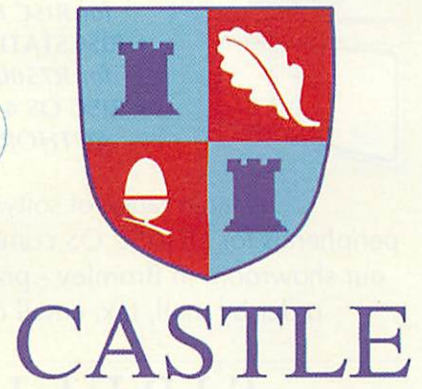






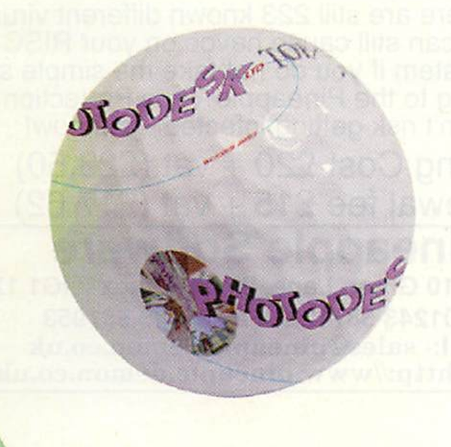








CASTLE

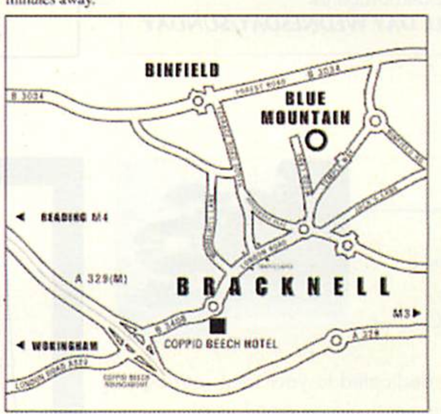


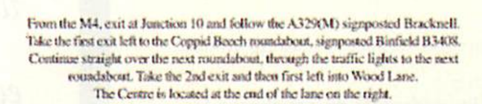


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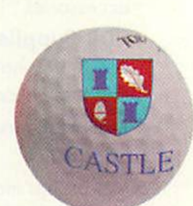
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A very versatile system

Mark Gillard explains how to turn a computer file into an audio CD with little effort

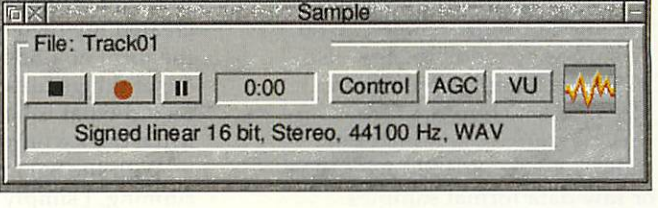
In recent months, while advising people on upgrading their old Acorn computers to newer models, I have answered a few people's specific needs stating that it is possible (and easy) to use a RISC OS computer to write music, or to record samples, or to write CDs.

On several occasions I have explained the whole process of performing all of these actions in sequence. Here is a slightly more detailed explanation:

Write some music

Here is a miniature I wrote while at the piano then later input into the computer for printing. For those more comfortable with Western musical notation, *Sibelius* is an excellent tool for preparing music for publication, on any level.

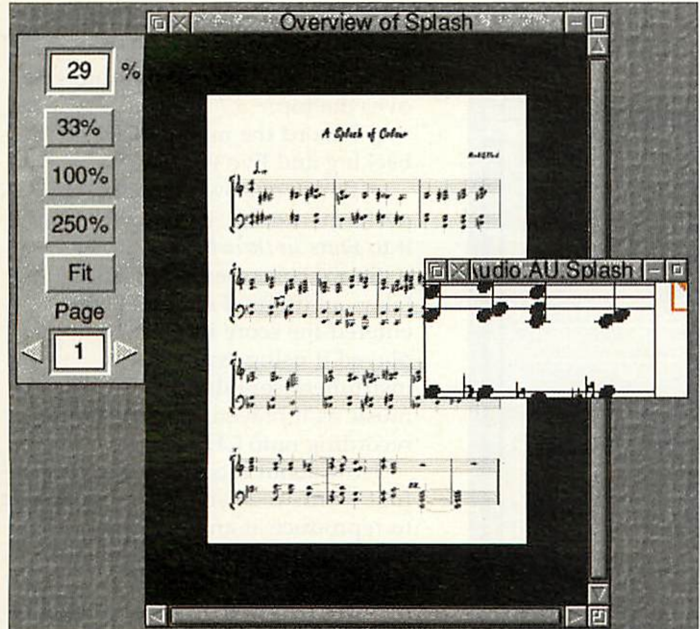
Music can be entered via the QWERTY keyboard or played in using a MIDI keyboard. For those wanting to use more abstract musical techniques and ideas, there are also several very good sequencer programs available. The main aim here is to get the computer to reproduce the desired organised sounds.



Make the sounds

Whereas it is possible to connect MIDI sound modules and audio sampler expansion cards to other RISC OS computers, the R7500 is by far the simplest solution for the purpose of recording MIDI output, since it is all handled internally.

The Yamaha DB51 offers nigh-on realistic musical instrument sounds and simply plugs straight onto the motherboard inside the computer. Once fitted, any MIDI information is automatically fed through the synthesiser and channelled out via the normal headphone/speaker socket.

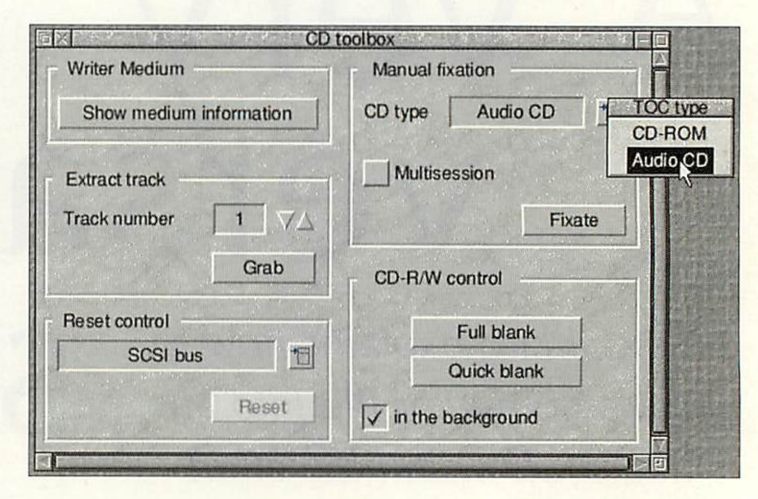


My composition is for piano and, although it would be easy to find a real piano and take a recording of a live performance, the computer offers the chance to capture a clean performance with no ambient noise or interruptions.

It also, for example, as the ability to reproduce the effect of a full orchestra without the cost implications or time constraints of gathering together a band of live musicians. This is a great boon to the composer or arranger who can instantly hear whether or not his latest work does work, or if it needs further refinement.

Record it

MIDI information is a sequence of instructions to a box of sounds to control when to make a sound, at what pitch, and for how long (*put simplistically*). In order to capture these events so that the resultant music can be put onto an audio CD, it must be recorded while it is being



played.

The R7500 can do just that. Gareth Simpson, of Simtec, who designed the motherboard, also wrote the Sample application software which records from various sources, and mixes of sources, to create ARMovie, WAV, or raw data format samples.

Gareth has provided a set of example files for automating the setting up of the recording process. It is possible to record from the internal CD drive, via the microphone and line-in sockets at the back of the computer, to capture the MIDI sounds as the instructions pass through the internal synthesiser card option, and also grab the internal systems sounds such as beeps, tracker music, or synthesised speech — or indeed, any combination and mix of these sources simultaneously. I have taken several of the example BASIC files and cobbled them together to created my own, specific script in the form of a BBC BASIC program to set things up so that I can easily record what is being sent via the MIDI device only.

With the Sample application running, I simply double-click on my BASIC file and I'm ready to record. Next, click on the record button in the Sample window then press Control+P to make *Sibelius* rock and roll, or possibly waltz sedately. Once the music has ended, press on the stop button.

Burn audio data to CD

Having captured the MIDI performace as a digital sample, the file can then be 'burnt' onto a blank CDR which is a simple matter of a few mouse clicks. Drag your WAV file (or a selection of them) into the "Current Audio Layout" window of *CD Burn* then click on the Burn icon to start writing the CD.

Personally, I prefer to write the CD without fixating it (once "fixated" no more data can be added to that particular CDR) and then fixate it later if I've really finished.

Play your music

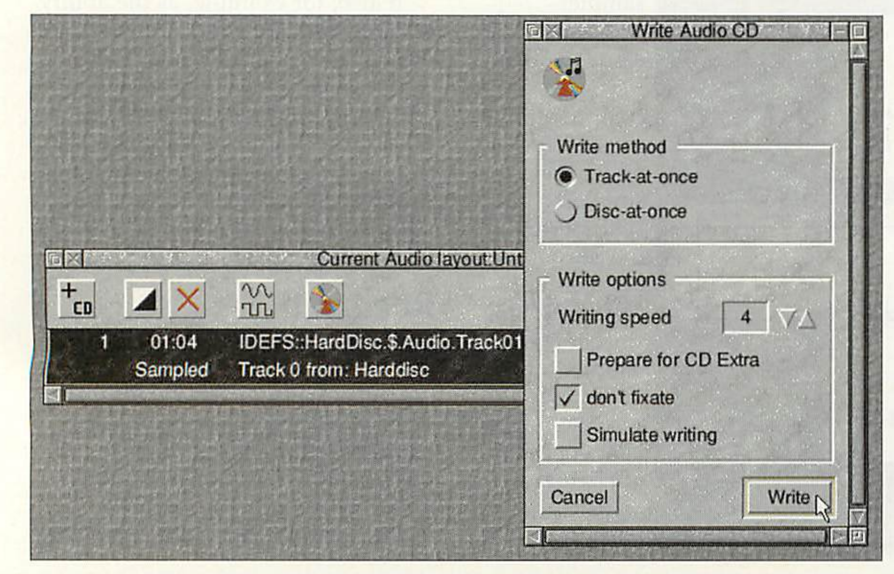
Your music CD is now written and most Hi-Fi systems will be able to read audio CDR.

If this process is our theme, then several variation on this theme immediately spring to mind. For example, imagine the following scenario:

- Download some music from the Internet in MIDI file format, play it back using *Sibelius* or a straightforward MIDI file player such as *Monolith;*
- Plug in a microphone and sing over the top;
- Record the mix of MIDI backing and live vocals;
- Burn your own karaoke performance CD, then maybe send it to *Stars in their Eyes;*

So we have seen how I have taken an original musical idea, entered the score into my computer, played it using synthesised instrument sounds, recorded the music as it played, then burnt the recording onto CD.

How about recording a child's first words then storing them on CD to reproduce at an appropriate moment in years to come — how much worse than baby pictures would that be? END



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1 RiscStation R7500 computer
1 copy of Sibelius
1 Yamaha DB51 XG MIDI synthesizer
1 Ricoh CD re-writer
1 copy of CD Burn

Method:

1 Be inspired. Be creative. Write some music. Using Sibelius, either play in using a MIDI keyboard) or type in (using the QUERTY keyboard) your choice of music. Alternatively you might choose to use a different music creation and editing program, a sequencer perhaps, to suit your particular talents and preference.

2 Add to your RiscStation R7500 the Yamaha DB51 XG MIDI synthesizer upgrade ready for realistic-sounding playback of your music. Don't forget to add the MIDI driver software.

3 Whilst playing your music, simultaneously record it using the Sample program provided with your R7500. This provides you with an audio sample suitable for the next stage of the process.

4 Take your waveform (.WAV) file, mix well with others if preferred - to cater for a variety of tastes, and add to CD Burn. When the mixture is to your liking, burn the selection to make a new audio CD.

5 Enjoy your new music CD at home, at work, or on the move. Also ideal for storage and appreciation at a later date.



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See page 61 for review of this product

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(New !Twain driver supplied. Now 2.5 times faster at scanning)

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!CDBlaze (CDRW software)....................£50.00
Cumana SCSI 2 card....................£158.63
CDRW Blank discs....................£2.50 each
CDR disc (Pack of 10)....................£6.99
650Mb PD Media Cartridges....................£30.55 each

Olympus Digital Cameras

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C-960Z 1.3m Pixels, 3x Optical Zoom....................£291.87
C-990Z 2.1m Pixels, 3x Optical Zoom....................£389.16
C-2040Z 2.1m Pixels, 3x Optical Zoom....................£486.45
C-3040Z 3.34m Pixels, 3x Optical Zoom....................£728.97

Above cameras do not come with Acorn drivers. Check with Photodesk on latest compatible drivers.

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Books for all

The delivery of a final 52 *Everyman Classics* to secondary schools today marks the completion of a unique initiative to distribute a Millennium Library to every state secondary school in the UK and to 1,700 schools and libraries in 77 countries overseas via the British Council.

The final delivery includes the Everyman Millennium Library CD-ROM set, a unique electronic resource to encourage pupils to interact with classic literature, bringing it to life.

Over the last two and a half years, The Millennium Library Trust, the only book project to be funded by lottery money from the Millennium Commission, has donated 250 Everyman Classics to 4,500 state secondary schools in the UK. A grand total value of £19 million.

The completion was celebrated at an event at the Round Reading Room at the British Museum, attended by HRH The Prince of Wales, authors, actors and publishers, alongside teachers and pupils from state secondary schools around the country.

The Millennium Library Trust was established four years ago to ensure that among the many projects funded by the Millennium Commission to mark the beginning of the new century. The donation has been funded by the generous support of the Millennium Commission, The Clore, Drue Heinz, The Esmee Fairbairn and Linbury Trusts, Dixons and Rank Foundations, Sir Paul Getty, Anglia Multimedia and Everyman Publishers.

Look at me!

Latest from the Softease range is *Textease Presenter*. Quite simply this is a powerful presentation package which can be used with interactive white boards, projection systems and computer screens. Look out in particular for Active Mark-up which allows teachers to circle or mark items during a presentation and gives the option to edit slides during a lesson.

Presenter is capable of running alone or as part of the growing Softease suite of programs. Softease tell us that it is easy enough for children or teachers to use allowing you to mix digital photos, video, sound, text, clip art as well as Word and Excel files.

Another nice feature is the *hide and reveal* feature. This allows you to uncover labels and drawings or progress to the next screen without revealing certain points by clicking the mouse. This allows for interesting interactive worksheets as well as presentations or books.

Other features of note include the repeat option which lets you place a logo or backdrop uniformly on each page, whereas an HTML save option lets you create web presentations.

The cost is £39 and full details can be found on 01335 343 421 or by visiting **www.textease.com**

In brief

Now officially launched is the North West Learning Grid's giant regional broadband educational network - NWLG. This network aims to link schools and local education authorities across the region at speeds nearly 2800 times as fast as a normal home Internet connection transmitting video, text, audio and graphics at up to 155 Megabytes per second.

Behind the NWLG is a consortium of 19 LEAs covering Cheshire, Greater Manchester, Merseyside and parts of Lancashire, is one of 11 regional broadband educational consortia being funded by the Department for Education and Employment.

"We want to give pupils, teachers, advisers and other educational managers high speed, reliable access to up-to-date technology and resources to improve learning, and the management of learning through Information and Communication Technology," commented Dr Modupe Omideyi, Project Manager.

North West Learning Grid is partnering Granada Learning in a venture to develop a regional intranet solution. This will provide every pupil and teacher with personal Web space, access to secure chat rooms and discussion forums, and the facility to create Web-based content without the need for programming skills.

David Eccles, General Manager of Granada Learning added, "Granada Learning is very pleased to be signing another private-public partnership which is set to transform the online environments currently used within education. Granada Learning's LearnWise is now the leading MLE within FE/HE and this agreement will begin its growth within the school sector."

This initiative will be used to deliver interactive web-based resources to schools and education authorities and complement the use of up-to-date technology such as interactive whiteboards and video-conferencing. It will also gives schools across the region instant access to each other to share ideas and expertise.

"An Advanced Skills Teacher at a desk in Blackpool will be able to teach a class of pupils in Cheshire, for instance," enthuses Simon Bailey, Content Co-ordinator. "We have had groups of teachers collaborating on inter-authority projects in the past. Now they will do it in cyber-space."

And for the future? Well, the consortium has plans to link up with the People's Network - public libraries network - eventually extending to form a regional community grid for learning.

Contacting me

Pam Turnbull:
educ@acornuser.com

Numbering Web pages

Pam Turnbull finds some numeracy-enhancing sites



W The long-suffering teacher needs every help she can get so this time we're looking at resources available on the Web to make the teaching of Mathematics that little bit easier.

numeracysoftware.com

www.numeracysoftware.com
Star rating: **

This site has Numeracy News (regularly daily), numeracy Web links, and a free numeracy download each week. These downloads include pre-written spreadsheets, *My World* screens, logo procedure files, data files and so on.

For instance, one of the latest downloads available before going to print were four *My World* screens that enable you to investigate which pentominoes will tessellate. Then there are free programs to download such as: *Counting Machine*, *Starters* and the *Estimation Pack*.

LCSI Microworlds

www.lcsi.ca/library/math/inde.html
Star rating: *

Provides a range of teaching resources: an on-screen geo-board which can be given logo-style instructions to create geometric shapes and patterns. Though you will need to download the MicroWorlds Web Player to access such resources - just follow the on-screen instructions.

No exciting graphics on the site itself just a range of short focussed programs to download for PC or Mac only unfortunately but there is an interesting range from: arithmetic with Roman numerals using this calculator; a coin-tossing game; another to predict a turtle's actions as it "senses" different colours: Escher-style tessellations; watching the turtles draw curves; and even looking for patterns in these ancient textile designs.

Math Magic

http://forum.swarthmore.edu/mathmagic/what.html
Star rating: **

Aimed primarily at Year 5 and above this rather dry-looking site is worth reading as it gives you to opportunity to make contact with another team from anywhere in the world, then discuss and solve a mathematical problem together. An interesting ICT cross-over here.

As well as working together teams must agree on the solutions they are going to post. If you want to dabble sign on as an unregistered user so you can receive all mailings, read the exchanges, but you can't post.

The World Clock

www.timeanddate.com/worldclock
Star rating: *

Shows time around the world and related information - sunrise and sunset times. It does what is says and provides a useful resource for time activities and has a nice crossover with ICT and Geography QCA documents.

Fractals for Kids

http:/math.rice.edu/~lanius.frac/
Star rating: **

A nice crossover with ICT, Art and Maths here as you can find out what fractals are, see examples and make your own. So if Mandelbrot sets and Sierpinski gaskets are new to you give it a go. An nice opportunity to extend geometric knowledge with post-SATs Year 6s. Not just a host of pretty pictures but a site aimed at children and at explaining the images and the maths behind them.

Fractions by Cynthia

http://math.rice.edu/~lanius/Patterns/
Rating: **

Fractions received the 'fun' treatment here though you wouldn't guess it from the look of the site! Using and applying, fractions of shapes. Contents vary from *Fun Fractions* to *Drawing Fractions* and even *Designer Fractions!* A nice activity based site useful for the Numeracy Hour with its step-by-step approach encouraging independent work. With answers and teacher support online.

What if ...?

www.rmplc.co.uk/eduweb/sites/ufa10/whatif.htm
Rating: **

Mathematical challenges for under 7s here. With starting questions such as: *What if you started to add numbers. What is the biggest sum you could do?* or *What if you had pots of five multilink cubes. How many different five models could you make?* There are over 20 of these which make the basis for an independent activity or oral/mental

starter.

Homework High

www.homeworkhigh.com/
Star rating: ***

If your pupils get stuck with the work you've sent encourage them to as an expert by sending their questions to Homework High's experts. They promise to try for a same-day turn around. Aimed mainly at 9 to 16-year olds.

The World Infozone

www.worldinfozone.com
Star rating: *

Redesigned, the maths element is only a part of a site which gives an interesting international angle to a range of subjects. Good presentation and a search engine are thrown in for good measure. Reviews of commercial software mix with reviews of Web sites, books and revision aids.

learn.co.uk

www.learn.co.uk
Star rating: ***

Part of the big Guardian Unlimited network, this offers students, teachers and parents online lessons and learning materials for Key Stages 3 and 4 which are interactive, utterly reliable, and enjoyable. Choose your lesson and you'll be presented with lesson objectives and the learning steps to achieving these.

So for someone interested in percentages you'll work through annotated questions on converting percentages to fractions and decimals before reversing the operation followed by a recap/plenary session before moving on to estimating percentages, decreasing and increasing by a percentage and exercises to test comprehension.

Finally there is a self-assessment checklist. An excellent resource with revision, news and online experts to add to the concoction.



GCSE Answers

www.gcse.com
Star rating: ***

Not just a maths site, this is updated regularly and you can find forward exam dates as well as tutorials on topics which often cause problems: BODMAS, negative numbers, probability and so on.

So if Trigonometry is your bete noir you can find help on right-angled triangles as well as sine and cosine rules. Being extensively revised at present I particularly liked the step-by-step solutions to problems. Some basic knowledge is assumed - how to add, subtract, multiply and divide - but the rest is covered.

I also liked the built-in progression, for instance start with the tutorials and you'll find you can do the *Easy Start* activities which should place you at around a Grade C. Follow this up with the *Heavy Duty Stuff* and you be taken to about Grade A.

An excellent site, this holds your hand and makes learning maths unfrightening for students and their parents!

BBC Education Bitesize

www.bbc.co.uk/education/bitesize
Star rating: ***

Very approachable and fits into the BBC's Revise Wise program on TV shorts, books and broadcasts. Well designed and broken into easy steps most start with a Revision Bite. From here students are led through a typical question and given hints on how to tackle it. Confidence blossoming then try out a Test Bite. Some interesting links from this site too.

History of Mathematics

www-groups.dcs.st-and.ac.uk/history/
Rating:**

An interesting cross-curricular link for older students. You can read about famous mathematicians or find out about famous curves from the Cartesian and Cassinian Ovals to Tschirnhaus' Cubic among others.

If you have access to a Mathematical MacTutor system, you can investigate these curves and their associated curves in an interactive way. Or if you're experienced with Java you can have a go too.

Of more interest to me are the contents of the section entitled: Mathematics in various cultures. This opens the lid of mathematics from Ancient Babylon, Mayan Arabian civilisations, India, Greece and Egypt before moving forward in time to America and Scotland.

Alternatively you can research a particular topics such as Algebra or Geometry and topology.

Brain teasers

www.eduplace.com/math/brain/
Star rating: *

Know your maths but have problems applying it? Then look no further. This delivers everyday problems which can be downloaded or printed for the classroom. A US site there is even an annual Brain Teasers Summer Contest each July. With a new question each week this would make an interesting challenge for a school. For those stuck the solutions are also given a week later.

Geometry through art

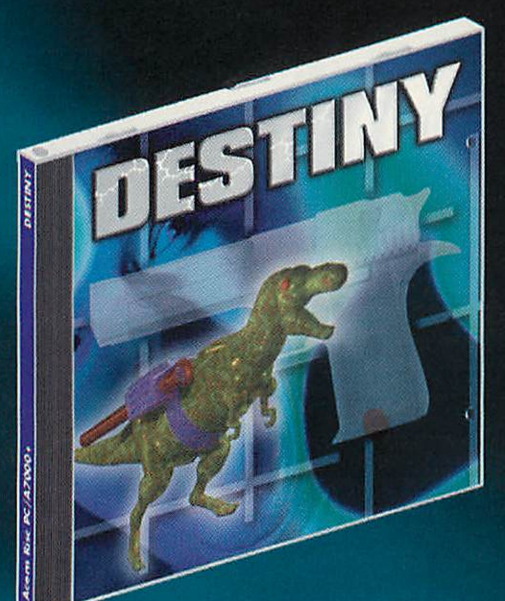
http://forum.swarthmore.edu/~sarah/shapiro/shapiro.square.lesson.html
Star rating: *

The title underlines the cross-curricular element here. There are in depth lessons to use or edit too. For instance, *Exploring numbers that yield squares and rectangles.* These lessons have been taught and practical advice is given on how a lesson has worked successfully in the past including sample dialogue, questions and results and the maths behind it all.

* some good points
** good for teacher resources
*** can be used constructively by teachers and students

DESTINY

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Acorn Arcade

"I would say that it is a good buy for all Risc PC owners"
Acorn Arcade

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Playable on A7000+, Risc PC 600 or better. StrongARM recommended. Requires CD-ROM drive, 10Mb RAM and 13Mb hard disc space minimum. RISC OS 4 patch available

Checkmate

Mike Tomkinson has an alternative to patience

Never hvaing been a great fan of computer games (OK, when they first appeared I liked the early Space Invaders and a few others) but as they became more sophisticated, (or I did), they lost much of their appeal.

However, there is one game for which the computer was practically invented: Chess. It is ironic that one of the oldest of Man's games should be so well suited to one of Man's newest achievement: the computer.

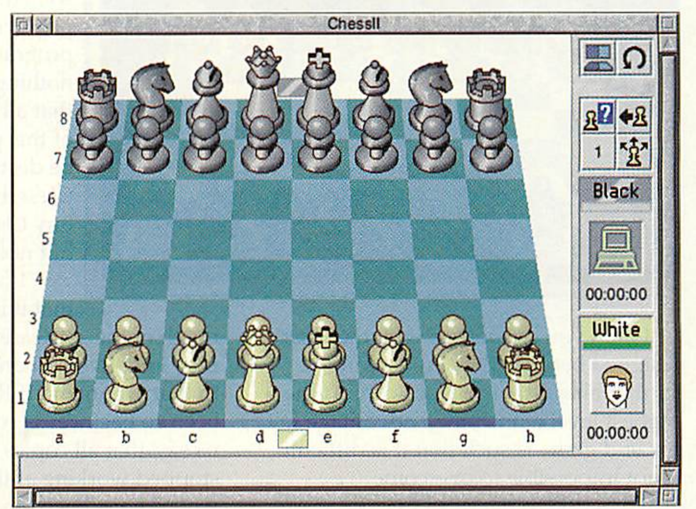
Chess is the classic strategy board game and its historical perspective should not be overlooked. The matches between Fischer and Spassky in the early 1970's were really a continuation of The Cold War on a board. Both American and Russian military intelligence studied the games in an attempt to divine their opponent's military strategy.

Chess has always been one of my favourite games but rarely one of the favourites of those around me. A shortage of human opponents need be no problem with a computer and a chess-playing program. The rules of chess are not difficult but to achieve a reasonable playing standard takes time. Great, because computers are infinitely patient tutors and opponents.

A while ago I was bought one of the latest (then) chess programs for the PC — *Chessmaster 7000* from Mindscape Entertainment. As is usually the case with PC games the box proclaims it to be the World's Most Popular Chess Program and I have no reason to doubt it. It really is an excellent package, full of the bell and whistles we have come to expect of programs on the PC and it plays a very strong game of chess.

I know that you are not reading this review to find out about PC programs but bear with me. Playing on the PC lead me to wonder what was available these days for the Acorn chess playing fraternity. I remembered the old *Cyber Chess* from The Fourth Dimension and a chess program from Dave Pilling from a number of years ago.

The Fourth Dimension disappeared some time ago, presumably into the Fifth Dimension but a call to Chris Evans at CJE Micros tracked down both *Cyber Chess* and a copy of *Battle Chess* from Krisalis Software, also now defunct. *Cyber Chess* is still being published but once all the copies of *Battle Chess* are gone that will be it — unless it appears on a forthcoming Krisalis collection. Thus, at the moment, we have three chess playing programs for the RISC OS platform: *Cyber Chess*, *Chess II* and *Battle Chess*.



I actually already had a copy of *Cyber Chess* but it was an older copy protected version utilising a key disc protection method. As such it would not play on a StrongARM/RISC OS 4 machine. The new version, (1.24a), installs and plays with no problems. For a program which cannot claim to be modern, it was copyrighted in 1992, it plays a good game of chess.

I wondered how good and set it up to play against *Chessmaster 7000*. Frankly I expected it to be slaughtered. *Cyber Chess* was White and so had that slight advantage in that White always goes first. I also did not set *Chessmaster* at its strongest setting but set it with a "personality" with a reasonable level of play but who overvalues bishops.

Chessmaster played the French Defence to White's opening of e4. In a further 68 moves *Cyber Chess* had won. A very satisfying win when you consider the relative ages of the 2 programs. 1 — nil to RISC OS. Hardly scientific or even systematic but *Cyber Chess* was the winner although I had hamstrung *Chessmaster 7000* a little bit.

In general *Cyber Chess* is a very good chess program. You have just enough options to configure the program to your strengths and weaknesses, good display — 2D and 3D (I preferred the 2D), and the price is right at a special offer price of only £25.

Chess II from Dave Pilling gives a slightly better view of the chess board and certainly a clearer view as it is more of a perspective view than a 3D one. I have included opening screen shots from both programs so you can see for yourself.

Just for fun I set it the same problem as *Cyber Chess* — to beat the same "personality" on *Chessmaster 7000* playing White. I really did not expect it to win. Although this version of Chess II (version 2.06) dates from 1995 it could surely not win against the PC program. Guess what? 68 moves later and it was all over — and the winner was *Chess II*. In fact it was over much earlier but *Chessmaster 7000* displays a fault of most chess programs — it does not know when to resign.

There comes a point in most chess matches where your opponent's superiority makes going on hopeless and useless — you may as well give up or resign in chess terminology. If you study many of the great games you will notice that few end in checkmate but most are resignations.

Checkmate

Often you cannot see why the loser resigned because they are looking further ahead that you or I can. At the highest level a one pawn advantage in the end game is such that it is difficult if not impossible to overcome. Anyway, 2-0 to the RISC OS programs.

Chess II has some nice touches, reasonably strong play, a fair degree of user control, excellent view of the board, can be set to solve mate puzzles but perhaps its strongest point is the price — a very reasonable £16 inclusive. *Chess II* is certainly not replete with bells and whistles but is competent at what it does. It will give you a good game of chess for a small outlay. It ran without fault on a StrongARM/RISC OS 4 machine.

That brings us to our third contender — *Battle Chess*, although Chris Evans from CJE assures me that there are very few copies of this program left so if you wanted one after reading get your order in quick.

Installation is straightforward enough although Battle Chess does requires a StrongARM patch which is supplied. However, the program does have an annoying copy protection system which requires the original disc to be in the drive and for you to input exactly a move from a game which is listed in the Appendix to the manual before it will load.

I had not seen the program at this stage — but I already hated it. From then on it only got worse. The program is not desktop compatible or compliant. The general idea is that the chess pieces are animated and actually fight each other. Unfortunately the view is awful, extremely annoying and the whole thing is badly executed.

I tend to the view that if you cannot say something, anything positive about a program it is best to say nothing. All I will say is that all remaining copies of this program should be destroyed. Buy *Cyber Chess*, buy *Chess II*, even buy *Chessmaster 7000* but not *Battle Chess*.

I have said before that it is fortunate that much of the software for the RISC OS is so long lived. There is another side to that argument. If RISC OS 4 had not been so backwards compatible and, let us say, that all copies of *Impression* had stopped working at that point what would have been the result?

Well, an obvious great outcry from the whole community. Fewer sales of RISC OS 4 almost certainly. But what then? There are alternatives like *Ovation Pro* which are still being supported and developed *but whose sales are held back by all the people still using Impression.*

In other words we only have ourselves to blame for any lack of software. I find it difficult to be actively encouraging users to be buying packages which are 6-8 years old simply because no other manufacturer will bring a newer product to the market. Where enough sales can be predicted some games are ported across to the Acorn but presumably sales of a chess program mitigate against that happening.

Effectively then there are two programs running in native form on RISC OS: *Cyber Chess* and *Chess II*. Each has its strengths and weaknesses. *Cyber Chess* is the slightly more polished program but I preferred the screen clarity of *Chess II* when in 3D mode although there was little to put between the programs in 2D mode.

As we have seen in terms of playing strength both games can compete with much more modern and expensive PC equivalents although probably not at the top level. Much of this has to do with the chess "engine" or chess playing part of the program. As you might expect the longer you give the computer time to "think" or compute likely moves ahead the more chance there is of it winning. Both programs can display the move or moves the computer is considering and it can be instructive to watch these.

Similarly you can set the programs so that the computer only considers its next move after you have taken yours although this is not the way a real opponent would play. Because the computer can take a relatively long time to make its next move you can also force it to make a move.

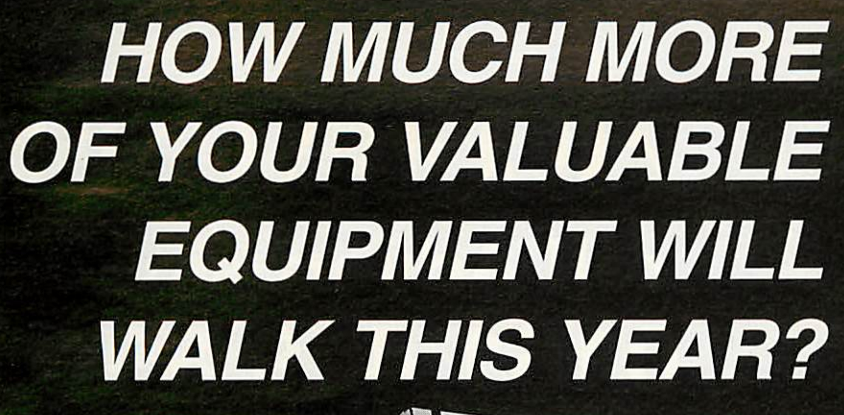
The computer may be infinitely patient but you are unlikely to be so. In most modern chess games the opponents have to make a specified number of moves in a certain time and once again both programs can be set in this mode.

Cyber Chess comes with both a printed manual and a printed Chess Tutorial with teaching points. On the disc are five famous games with short histories in the Owner's Manual. As I have said you can learn a lot from a careful study of classic games but there is no real substitute for playing. You can enter games as text files into *Chess II* using either algebraic or non-algebraic notation.

Both *Cyber Chess* and *Chess II* fulfils the aim of giving a human opponent a reasonable game of chess and would be useful in instructing the beginner. Neither is expensive and in fact the combined cost of both is less than the original price for *Chessmaster 7000*. If everybody bought both we might convince someone that there was a market for bells and whistles new version. END

Product details

Product:	Chess II
Price:	£16
Supplier:	David Pilling, PO Box 22, Thornton Cleveleys, Blackpool FY5 1LR
E-mail:	david@pilling.demon.co.uk
Web:	www.netlink.co.uk/users/pilling
Product:	Cyber Chess
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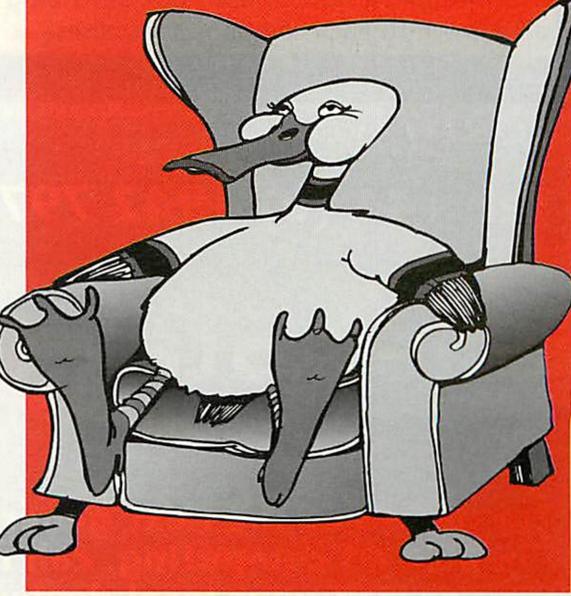
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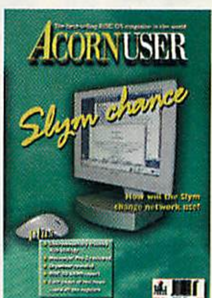
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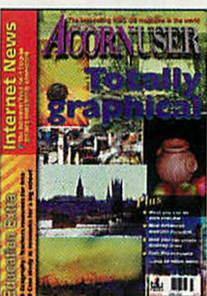
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- Mike Cook's Graphics Suite
- More on User Interfaces



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- RISC OS graphics round-up
- New Artworks modules review
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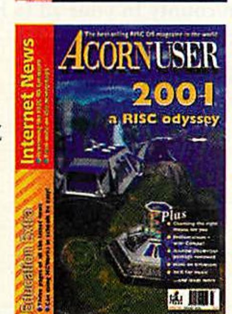
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• RISC OS 3 Acorn, 4MB Hard Drive,2048K Memory, A3010 Keyboard, AKF18 Colour Monitor, Mouse, Manuals, Advance operating disks, VGC £100. Tel 01933 626326 (Northants)

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• WANTED: a mouse to fit an Acorn 3010 or information as where I might get one reply to lm@man.fwltech.com

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What's your purpose?

In regard to your editorial in issue 236, I have to say that I would like RISC OS and ARM-based computers to be the most-used computer system in Europe and Australasia, but I am happy for the Americans to stick with PCs.

My first introduction to Acorns was when my daughter started school and I thought it would be sensible to have the same sort of computer at home as she was using at school. I soon found that there was a great deal of good-quality educational software for the Acorn as well as good-quality word processors and so on.

When I bought a RISC PC I bought some educational software for the PC side and was very disappointed. Even software made in this country has to cater for the American market by using American spellings.

I want the RISC OS market to be healthy enough to survive, but I dread the day we break into the American market and RISC OS developers feel obliged to start spelling words incorrectly — I want my children to learn to spell correctly.

Mark Syder
Australia

PS: Before anyone asks, yes it irritates me no end when I see 'gray' instead of 'grey' in DrawWorks and when I see RISC OS help screens referring to a 'dialog' box instead of a 'dialogue' box. Developers please note!

Perhaps we'll just add a "US English" language option, that will solve all the problems — after all, we don't need to be parochial.

Assuming that RISC OS actually stands a chance of expanding once more (and I couldn't do this job if I didn't believe that) we will probably find that we will need to add lots of new and interesting languages.

Back to the penguin

Having read the contribution from Mark Stephens (issue 236), I am also running my pre-Risc PC with Linux Mandrake 7.2 box, with the anticipation of something new being introduced from Omega and others. In the meantime I have to use a computer system that gives me specific requirements not available on my trusty old Acorn.

You may remember many years ago, even Acorn themselves — in the shape of the RiscX machines ventured down the Unix path. Working with a Linux system nowadays is getting better and better every month as can be supported by the massive take up Red Hat, Suse and my current favourite, Mandrake.

Rather than looking at how to integrate a MS system with expensive overheads in both time and money, the use of a Linux box for everything from fire walling your Internet connection, Intranet use for SOHO users or for gaining access to the latest in C compilers and other programming goodies makes this a far more interesting proposition than you may think.

Microsoft connectivity will always be an important issue for both PC and non-PC users and Linux projects such as StarOffice and WINE are making their contribution just as *TechWriter* or Warm Silence products are aiding RISC OS. Ports of many Linux programs find themselves appearing in many formats and as Apple has shown, by incorporating BSD Unix to power System X (the 'cancer' as one Microsoft aide put it) will continue to be with us — so let us embrace it.

I am backing Mark on this one and suggest in your next survey, you look much more closely as to how we readers are utilizing not only our RISC OS machines but how we are interacting with others.

Rod Falconer
Arbroath

More ruddy vikings

Following on the spam issue, some spammers (in fact lots of spammers) get addresses from bots trawling through Web pages in a similar way that some search engines find pages by following links. They look for e-mail formatted text and return them to the mailing list of the spammer.

I have several e-mail addresses on my site and one US company regularly (once or twice per day) sends me a message to each address, giving me plenty of junk mail from a company I will never use because of their bad practices.

One way to avoid spammers getting your address from your Web site is to use JavaScript for your e-mail address. Not as complicated as it sounds, try this (assuming your e-mail is **my_name@acornuser.com**):

```
<!- hide from non-JavaScript
browsers
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document.writeln("my_name");
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document.writeln("acornuser.com");
</script> ->
```

This stops most spammers that read the file as text but do not translate the JavaScript.

Unfortunately this stops your e-

mail address appearing at all if the person browsing does not allow JavaScript or their browser does not run JavaScript. So think of your audience and use with care.

Graeme Shrimpton
by e-mail

More future questions

As an avid fan and user of Acorn/RISC machines and *Impression Publisher*, this morning I phoned Computer Concepts and asked if there was any likelihood of further development and upgrade. The answer came in the negative. When I asked why they were not going to develop things further I was simply told it was "because there is no longer an Acorn market, sorry!"

To be honest, I was a little shocked! So what is it I am part of here? A bunch of rather eccentric and ever-dwindling enthusiasts for a market that, according to Computer Concepts, no longer exists!

I must confess, I have always bought *Acorn User* from over the counter, and unordered. I refuse to have it any other way as I believe that it is necessary for an Acorn/RISC magazine to be seen by a wider audience. Most people think that Acorn went bust and no longer exists — including a newsagent in Mill Road, Cambridge.

Living, as I do, on the edge of Cambridge, one might have expected that it would be easy to purchase *Acorn User* this way. Alas it is not! Apart from going into central Cambridge, and even then it's usually extremely difficult to see any copies on most newsagents shelves, I usually buy my copy each month from Tindall's of Newmarket. Last month they cut the number on their shelves from three copies to just one — the one I bought!

I also take *Digit* magazine every month. On the cover it says, PC & Mac. I do not believe that I have ever seen anything in *Digit* about Acorn/RISC OS, although I have seen several things about Linux, for example. Where are the reviews on the Acorn/RISC success stories, such as the solar-powered *Solo* and Cerilica's *Vantage*, for example.

How can we really expect to see our platform and products not only survive but prosper and grow, if we don't start pushing ourselves forward and telling other magazines — such as *Computer Publishing*, *Digit*, *Computer Arts* and so on — that we even exist?

We also need to educate the general public, who will look at our latest machine, the 300MHz Kinetic, and try to compare that quite simply with a 1GHz+ PC. To them it's like comparing a 1000cc car with one that's 3000cc.

About 18 months ago I needed a laptop computer for my work. A RISC OS product would have been my preferred choice, but it simply was not an option as such an animal does not exist. I was forced to go out and buy an Apple Mac instead. Now let me ask you this, how long has CTA been showing us pictures of, and promising us, a RISC OS laptop?

You have to give it to Apple, they keep extremely quiet and then simply plop the product in your lap (excuse the pun). The latest iBook is a good example. Our approach seems to be to show an unfinished, or demo, product (and this applies to software as well as hardware) many months before a working product is even viable, let alone on sale.

This seems to follow on from Acorn's days with the Feeble — sorry, Phoebe! By the time the product arrives — if it ever does — we've already told other platforms what we're working on and, with their greater financial clout, they've either caught up or surpassed us then in any case.

To be honest, I am really at a loss as to understanding where our future lies unless we can be seen by a wider audience.

Ollie Batts
by e-mail

Size is relative. Compared to the PC market the RISC OS market is so small as to be non-existent. And Acorn did vanish, nearly three years ago, so anyone who thinks they went bust is basically correct.

And, sorry, but any idea that Acorn User *should be easier to get hold of in Cambridge is not logical. The magazine is put together in Stockport, printed in St Albans and nationally distributed from Coventry.*

However, having said all that, the solution does lie in promotion to new markets. Part of that is in press releases, PR is the most under-used (and least expensive) weapon in the sales arsenal. RISCOS Ltd should be blitzing every news outlet with press releases about every RISC OS related piece of news it can lay its hands on — no matter how apparently uninteresting.

Let me make what I mean absolutely clear: The product of RISCOS Ltd is "sold units of RISC OS for desktop computers" — and that is what should be promoted.

News editors are (a) lazy whenever possible; and (b) never have enough news. So if a press release is provided in an easy-to-use form that requires no effort to reproduce in a news column it will get used.

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Next layer down is the manufacturers, they should be doing the same thing but obviously for their own products. The same rules apply although they may have their own specific markets to target. But the communication lines of those markets must be flooded with information about RISC OS.

On your final point, yes it would be better if companies came up with completely finished and thoroughly tested products rather than either not currently existing, not quite finished or not completely tested.

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